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AUTHOR	Sheffield, James R.
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ABSTRACT

As in most developing countries, education in Kenya is reported to have developed through three broad, overlapping phases: traditional, missionary, and governmental as influenced by the country's geography, climate, population growth, economy, and striving for independence. In the process, long-range educational goals have evolved: 1) to provide universal primary education; 2) to ensure enough places at the secondary and higher levels for educating those with recognized abilities; and, 3) to organize the educational system for meeting the country's manpower needs, thus stressing expenditures in education as an investment in the Nation's economic development. The structure and administration, finance and government aid, curriculum and examination elements of this formal system are discussed along with educational programs outside the system including youth programs, adult education, professional development programs, and conservation education. Two highlights of the report are: 1) a description of the establishment and development of community self-help or Harambee schools; and, 2) a description of the 1970-74 Development Plan giving rural development top priority and setting a goal for making the secondary school curriculum more relevant to the country's social and economic needs. Curriculum excerpts, a schedule, and selected references are appended; thirteen tables of statistical data on enrollments and expenditures are also included. (Author/SBE)

HIGHLIGHTS

•A former British colony, Kenya became independent on December 12, 1963.

•In August 1969 Kenya's population reached 10.8 million.

•The country's long-range educational goals are (1) to provide universal primary education, (2) to ensure enough places at the secondary and higher levels for educating those with recognized abilities, and (3) to organize the educational system for meeting the country's manpower needs, thus stressing expenditures in education as an investment in the Nation's economic development.

•A major problem for secondary schools is the low percent of form 1 places available to those who finish primary school. To help alleviate this situation, parents and others have joined together to establish and maintain so-called "self-help" or "Harambee" schools, a movement whose impact is unequaled in any other African country. Receiving no Government aid, the Harambee schools in 1967 outnumbered Government-aided schools, and by 1968 many of the better ones received Government support and were brought into the maintained system.

•The 1970–74 Development Plan, Kenya's third, gives rural development top priority, reiterates the Government's long-term commitment to achieve universal primary education, and sets a goal for making the secondary school curriculum more relevant to the country's social and economic needs.

•The rise in expenditures by the Ministry of Education over 4 years is revealed in the following figures:

Year	*Capital expenditures*	*Recurrent expenditures*
1964–65	$1,269,784	$11,059,300
1968–69	8,283,682 (est.)	21,878,360 (est.)

•In July 1970 the University of East Africa (its components had been three university colleges—one each in Kenya, Tanzania, and Uganda) disbanded to establish a separate university for each of the three countries. As a separate entity, the new University of Nairobi is expected, under Kenya's 1970–74 Development Plan, to achieve an undergraduate enrollment of 3,433 in 1973–74.

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Education in the Republic of Kenya

by James R. Sheffield
Assistant Professor of Education
Teachers College, Columbia University

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Elliot L. Richardson,
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Robert Leestma,
Associate Commissioner for International Education

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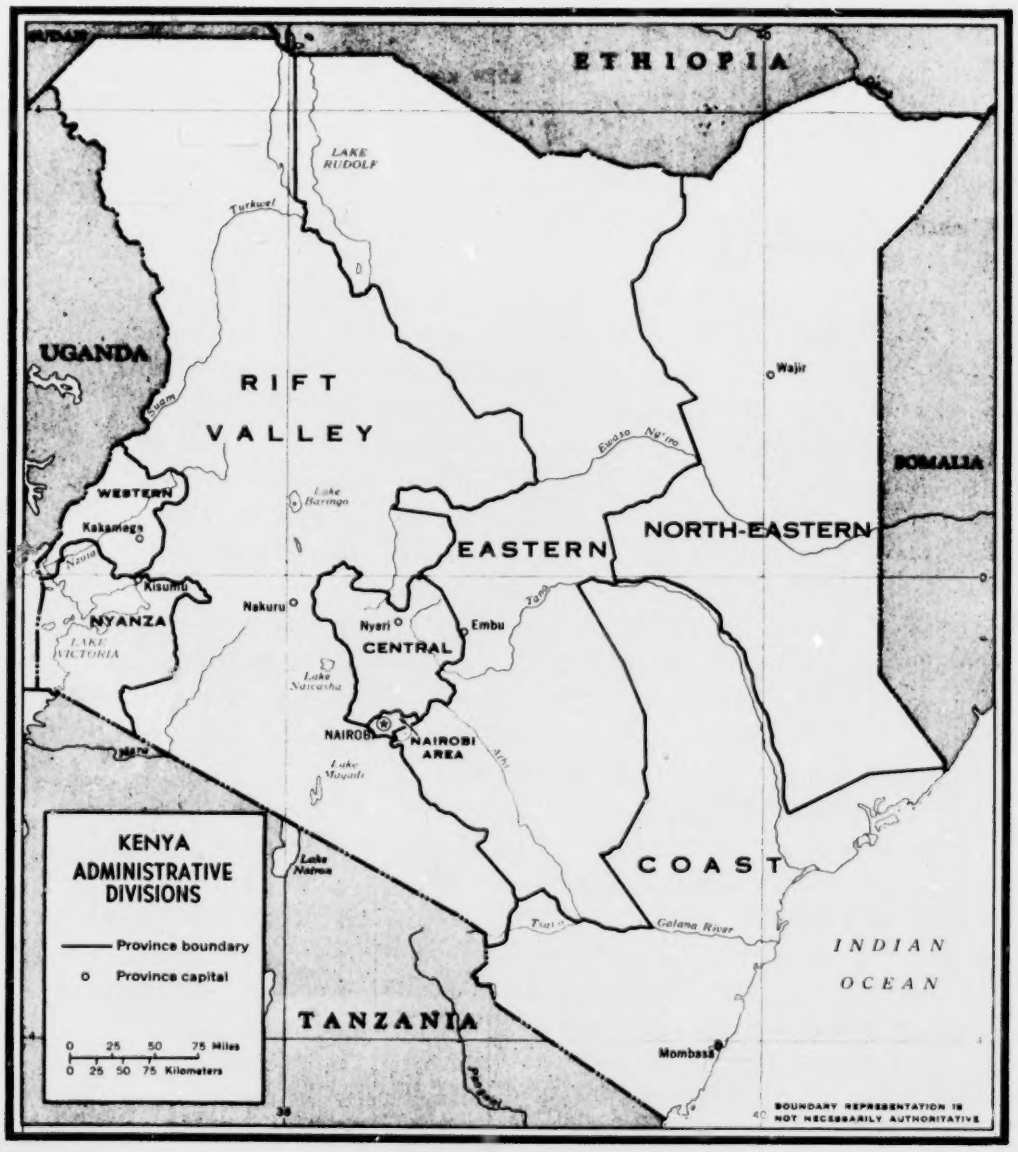
Foreword

The Republic of Kenya gained its independence on December 12, 1963. From that point on, in common with other newly independent African nations, Kenya has been confronting the difficult problems of nation building and economic and social development. This report on Kenya's commitment to education follows the Office of Education's earlier reports on education in three other African countries. These earlier reports were entitled *Education for Africans in Tanganyika* (Tanganyika merged with the former Zanzibar in 1964 to form the new nation of Tanzania), *Education in Uganda,* and *Educational Developments in the Congo (Leopoldville)*. The Congo (Leopoldville) is now known as the Congo (Kinshasa). In a larger framework, this report takes its place in the Office of Education's long-established series of publications on education in other countries.

The author of *Education in the Republic of Kenya,* Dr. James R. Sheffield, is Assistant Professor of Education at Teacher's College, Columbia University and Director of the College's Center for Education in Africa. During the summer of 1962 he worked briefly at the Kenya Ministry of Education in Nairobi and from 1965 to 1967 served in the Ministry under the auspices of the Ford Foundation. During those years he gathered much of the material for the present report.

The Office of Education and the author wish to thank the officials in the Kenya Ministry of Education who supplied documents and literature for the study and who otherwise facilitated the author's search for pertinent materials. Dr. Sheffield also wishes to express appreciation to Mrs. Susanne Nanka-Bruce and Mr. Peter H. Lary of New York who assisted him at several stages in collating the research and reviewing the manuscript.

ROBERT LEESTMA
Associate Commissioner for International Education



Kenya: Provinces and Province Capitals

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The Country's Background

Geography, Climate, and Population

Approximately the size of Arizona and Nevada combined, Kenya is 225,000 square miles in area. It borders on five nations (Ethiopia, Somalia, Tanzania, Uganda, and Sudan) and the Indian Ocean. For political administration, Kenya is divided into seven Provinces and one Extra-Provincial District.[1]

Although Kenya's highlands to the north and west of Nairobi have excellent soil and an almost ideal climate, 80 percent of its land in an average year receives less than 25 to 30 inches of rain; 25 percent, less than 12 inches. Lack of rainfall is one reason for the country's low agricultural productivity: it has less potentially productive land per inhabitant than Tanzania, Uganda, or Zambia.[2]

With a population of about 10 million[3] (97 percent African; the other 3 percent Arab, Asian, and European), Kenya has an average population density of 40 persons per square mile. A total of 92 percent, however, live on less than 25 percent of the land,[4] concentrated near Lake Victoria in Nyanza Province at the west and also in the central highlands.

Of the approximately 40 tribes in Kenya (the number depending upon one's definition of a tribe), the four largest—Kikuyu, Luo, Luhya, and Kamba,[5] in that order—make up nearly one-half of the country's 10

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[1] These political administrative areas are North-Eastern, Eastern, Coast, Central, Nyanza, Western, and Rift Valley Provinces and Nairobi Extra-Provincial District.

[2] Kenya. Ministry of Economic Planning and Development. *Development Plan 1966–70*. Nairobi: Government Printer, 1966. p. 36.

[3] The population estimate is derived from the 1962 census, with adjustments for rate of growth and net migration. Kenya. Ministry of Economic Planning and Development. *Statistical Abstract Annual, 1967*. Nairobi: Government Printer, 1968. (A census taken in August 1969 showed that Kenya's population had grown to 10.8 million. This figure had not yet been published by the Government in official statistical form as of April 1970.)

[4] William A Hance. *African Economic Development*. New York: Prager, 1967. p. 190.

[5] The next 10 most populous tribes were the following: Kisii, Meru, Mijikenda, Kipsigis, Turkana, Nandi, Masai, Ogoden, Tugen, and Elgeyo.

million population. The latest published Government census (1962) gave the following tribal figures:

Kikuyu	1,642,065
Luo	1,148,335
Luhya	1,086,409
Kamba	933,219

Immigrant races have played a large role in Kenya's development, Europeans dominating cash crop production and Asians dominating commerce. In 1968, Kenya had about 43,000 Europeans and 190,000 Asians, most of them concentrated in the major urban areas of Nairobi, Nakuru, Mombasa, and Kisumu (named in order of size).

Nation Building

After more than 50 years of British rule, Kenya attained independence on December 12, 1963. Jomo Kenyatta, whom the British had "detained" for his alleged involvement in the 1952 Mau Mau Rebellion,[6] became Prime Minister and a year later, the new Republic's first President.

As head of the majority party, the Kenya African National Union (KANU), as well as Head of State, Kenyatta has worked steadily to break down the barriers separating tribal and racial groups. Fear that large tribes would dominate the small ones was one reason why the opposition party, the Kenya African Democratic Union (KADU) was formed in 1960. In November 1964, however, KADU disbanded and joined KANU.

The cry "Harambee" (Swahili for "Let's all pull together"), popularized by Kenyatta during the 1963 election campaign which put him into power, is now the national motto appearing on the official Government shield. As the national motto, it serves the Government when exhorting all racial and tribal groups to become citizens of Kenya and to play their part in building it into one nation.

For over 3 years (spring 1966 to late 1969) national unity, despite the "Harambee" slogan, was something less than complete owing to the existence of an opposition party, the Kenya People's Union (KPU) formed by the former vice-president, Oginga Odinga. With KPU'S banning, Kenya is now a *de facto* one-party State. The average citizen, however, does play a role in Kenya's development through his elected

[6] Certain findings after Kenyatta's trial have led some writers to conclude that it was based largely on circumstantial evidence and even perjury. For example, see John Spencer's "Kenyatta's Kenya" in *Africa Report*, 11:5, May 1966.

Official Shield
Republic of Kenya

representative in Parliament and through his own initiative on the local scene. At the same time, the Government goes to great lengths to explain its programs to the people and to seek their support.

The Economy

Like most other developing countries, Kenya is predominantly agricultural; approximately 80 percent of its population earns a living from the land. Although European settlers dominated Kenya's agriculture during the colonial period, much of the "white" highlands (areas restricted to white persons) which they have occupied and cultivated since that period has now, following Independence, been transferred to African owners.

The 1966-70 Development Plan

Under Kenya's 1966–70 Development Plan, agriculture has made the largest contribution of all sectors in the economy to the country's gross domestic product (GDP). Further, nearly one-third of Kenya's total export earnings is derived from coffee; pyrethrum, sisal, and tea constitute the other principal exports.

With its great dependence upon agriculture, the G.D.P. fluctuates along with changes in international commodity prices, the incidence of plant diseases, and the vagaries of weather. These three conditions rendered 1965 a particularly disastrous year; but in 1966 the G.D.P. grew 14.8 percent and in 1967, 5.4 percent. Despite 1965's negligible growth, the cumulative growth rate at constant prices was 6.3 percent from 1964

to 1968, almost exactly the rate projected in the 1966–70 Development Plan.[7] According to that Plan, agriculture will remain Kenya's largest earner of foreign exchange (from 1966 through 1970, 40 percent of all exported goods and services) and income from tourism will increase 15 percent. The actual fact is that this income of nearly $50 million annually is increasing at a rate much faster than 15 percent, and will reach $100 million in 1974.[8]

Between 1964 and 1970, according to Plan estimates, Kenya's annual per capita income would rise from $87 to $104, a figure which was easily surpassed.[9]

The 1970-74 Development Plan

In late 1969 Kenya issued its third Development Plan, covering the years 1970–74. In the new plan, rural development becomes the top priority, with greater emphasis on building up the less developed areas of the country. Whereas per capita income had grown at an annual rate of only 0.5 percent between 1954–64, it accelerated after Independence and was expected to grow from $120.00 in 1967 to $154 in 1974.[10]

The 1970–74 Development Plan makes plain its major objective of reducing the income gap between urban and rural areas. This will be accomplished by simultaneously placing heavier tax burdens on the rich and relieving the poor of the Graduated Personal Tax and by concentrating more development projects in the rural areas.

The Plan reiterates the Government's long-term commitment to achieve universal primary education. By increasing the average class size from 32 to 40 and by building up a Supervisory Service along with expansion of facilities, the Plan estimates that the proportion of children in primary school will rise from 61 percent in 1968 to 75 percent in 1974. After 1970 the Government will assume all financial responsibility for primary education in County Council areas in order to equalize opportunities; and to accomplish this purpose it will expend its greatest effort in the presently least developed areas.[3]

At the secondary level, the priorities for the 1970's are to make the curriculum more relevant to the country's social and economic needs. With help from the International Development Association of the In-

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[7] Kenya. Ministry of Economic Planning and Development. *Economic Survey 1968*. Nairobi: Government Printer, 1968. pp. 6 and 7.
[8] Ibid. p. 89. *and* Kenya. Ministry of Economic Planning and Development. *Development Plan 1966–70*. op. cit. pp. 95 and 204. *and* Development Plan 1970–74. Nairobi: Government Printer, 1960. pp. 28 and 428–30.
[9] Kenya. Ministry of Economic Planning and Development. *Development Plan 1966–70*. op. cit. pp. 13 and 89.
[10] Kenya. Ministry of Economic Planning and Development. *Development Plan 1970–74* op. cit. pp. 1–3.

ternational Bank for Reconstruction and Development (World Bank), the Government has embarked on an ambitious program to expand facilities in agriculture, commerce, domestic science, and industrial arts.[11]

Exports

In the fall of 1969 Kenya had available for export approximately 255 items comprising both natural products and goods manufactured from domestic and imported raw materials and/or other components.[12] Among the natural products were cattle, cereals, dairy products, edible fats and oils, fish, fruits, mineral waters, nuts, poultry, spices, sugar, tobacco, and vegetables.

The exotic or tropical fruits which Kenya is actively promoting for export include among others avocado pears, mangoes, passion fruit (and passion fruit juice), and pineapples. Many of these exports are sold primarily to the other countries in East Africa.

As substitutes for expensive imports, Kenya produces such diverse items as asbestos products, baby foods, beer and brandy, cake mixtures, chain link fencing, ice cream, illuminated signs, jute sisal bags, medical gases, pesticides, prefabricated housing, tires and tubes, and varnishes. Taxidermy skills and other practical arts required to produce objects from animal skins result in the export of such articles of furniture as lamps, rugs, stools, and trays; and such articles of wearing apparel as belts, handbags, and shoes. Agriculture will continue to be Kenya's largest income producer, but the Government is trying to diversify its exports during 1970–74.

Education's Role in Economic Development

Kenyans have expected much from education in improving their country's economy after Independence. Educational development, however, has been more a general goal than a specific strategy, partly because the first Development Plan was already in force before the country's first manpower survey was completed and before the Ministry of Education had established its Planning Unit. Thus, the Government from the outset of the Plan in 1964 gave education a high priority within the country's overall development; but it was not until publication of the manpower survey and the Education Commission's report in 1964 that the Government formally addressed itself to the critical questions: What kinds of education will best serve an independent Kenya? What priorities should be assigned to those kinds of education? [13]

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[11] *Kenya Export News*. Nairobi: D. A. Hawkins Ltd. September/October 1969. p.xii.
[12] Ibid. pp. 452–60.
[13] For educational planning, see chapter 3 of the present publication.

Educational Development

Traditional Education

As in most developing countries, education in Kenya has developed through three broad, overlapping phases: traditional, missionary, and governmental. In the first phase, education was never equated with formal schooling confined to the four walls of school buildings. In his famous study of the Kikuyu tribe, Jomo Kenyatta wrote, "Education begins at the time of birth and ends with death." [1]

Each of Kenya's approximately 40 tribes had its distinctive means of preparing an individual for his role in tribal society, but nevertheless all these tribes followed three general methods of teaching by—

Parents and elders
Craftsmen under an apprenticeship system
Elders in initiation rites (frequently those of formally organized groups) [2]

Under these methods children acquired specific skills and learned how to relate themselves properly to their immediate and extended families, their ancestors, their peers, and their gods. One must grant that traditional education was successful in preserving the behavior code of a relatively static tribal society. But, with the influx of settlers and enterprises from the West, the entire fabric of that society was destroyed: a new type of education became necessary to enable the society's members to reweave the fabric and make it serve them in their rapidly changing world.

Missionary Education

The slave trade and what Dr. Livingstone called "the great social evils of African society" stimulated concern among missionary groups

[1] In his *Facing Mt. Kenya*. New York: Vintage Books, Random House, 1962. p. 96. (Initial publication, 1938 in London)
[2] Melville Herskovits. *The Human Factor in Changing Africa*. New York: Alfred A. Knopf Division, Random House, 1962. p. 222.

for the Africans' well-being. Several decades before Great Britain took control in 1895 (from the Imperial British East Africa Company) of the area that is now Kenya, missionaries of various denominations had set up schools for Africans throughout that area. Little doubt exists that the primary goal of missionary education was to make converts and train catechists, but it soon established, as basic elements in the curriculum, practical skills like carpentry and gardening (chiefly to maintain mission stations) and literacy.[3]

Certainly, the early missionaries on the whole were altruistic, although frequently a mission would waste scarce human and physical resources by competing with other missions for native converts. Such competition meant duplication. Of more serious consequence, though, was the missionaries' tendency to disapprove of and even prohibit certain traditions that formed an integral part of a local culture.

The missionaries' edict to prohibit female circumcision in the Kikuyu tribe contributed to the tribe's setting up its own churches and schools. This tribe and others resented such edicts, which wrought severe conflicts and dislocations within the traditional society—effects to which missionaries often seemed insensitive in their zeal to develop a new value system and a new behavior code. In the face of tribal resentment and resistance and in the absence of financial help from the Government, the missionary educational effort was bound to be extremely limited.

Governmental Concern for Education

When Great Britain took control of the area in 1895 from the Imperial British East Africa Company, its first educational concern was to provide schools for the European settlers' children, a concern paralleling the Government's decision to develop the area's economy through agricultural improvement and growth to be accomplished by these settlers. The Government appeared willing and glad to leave the education of African children in the hands of missionaries. In 1911, however, the Government established an education department and in 1914, at Machakos (about 40 miles from Nairobi), the first Government school for Africans. This was an industrial school modeled "on the Negro industrial schools of America founded by General Hampton and Booker Washington . . . to educate the boys mainly through the hands, providing a sound general education and technical training in one trade for each pupil." [4]

[3] Roland Oliver. *The Missionary Factor in East Africa*. London: Longmans, Green, 1952. p. 213.

[4] East African Protectorate. *Evidence of the Education Commission*. Nairobi: The Swift Press, 1919. p. 185.

The 1918 Education Commission

At the request of the Director of Education, the Governor of Kenya Colony and Protectorate in 1918 appointed an Education Commission "to consider . . . the background state of education of all races in their Protectorate." [5] Most of the Asians and Europeans testifying before the Commission were concerned primarily with improving educational facilities for their own racial groups; but the Director of Education and several others made a strong case for educating Africans as well. Regardless of racial orientation, however, nearly all who testified urged the Government to give greater support than previously to the educational efforts of voluntary agencies and of self-appointed school committees operating on nonracial lines.

No one suggested that the Government should take over the operation of existing schools. Rather, representatives of both the missions and the Government recognized that common interests would be served best through cooperation. The Government did not feel disposed to establish or staff more than a handful of schools even though Kenya, like other British Colonial territories, was supposed to be financially self-sufficient. Nevertheless, the need for educational coordination and for a uniform educational policy throughout the territory became increasingly evident.

The 1924 Phelps-Stokes Reports

Government subsidies to approved mission schools laid the groundwork for the so-called "grant-in-aid" system which evolved later. Cooperation between the Government and the missions was formalized considerably following the 1924 Phelps-Stokes Commission reports. These reports called attention to the need for greater Government-mission cooperation and the Government's "practically negligible" expenditures for education of Africans.[6]

The 1925 Memorandum

In 1925, the Great Britain Colonial Office issued its first official policy statement on African education, *Educational Policy in British Tropical Africa*.[7] The 1925 Memorandum, as it came to be called, laid down 13 broad principles which became the Colonial Office's basis for educational policy in all the British African colonies.

Most basic of all 13 principles was the one that education should be

[5] Ibid. p. 169.
[6] Thomas Jesse Jones. *Education in East Africa*. London: Edinburgh House Press, 1925. p. 118.
[7] Great Britian Colonial Office. *Educational Policy in British Tropical Africa* (Command 2347). London: His Majesty's Stationary Office, 1925.

adapted to the needs of the local community, conserving the best aspects of traditional society while preparing the individual for the changing world in which he would live. This local community-oriented education would be accomplished largely by the missions, but the Government should increase its subsidies to approved mission schools through grants-in-aid. The Government's rationale for continuing to rely on missions was that in so doing it would utilize existing staff and facilities and would confirm its strong commitment to religious training and character training in the schools.

The 1925 Memorandum urged the Government to give greater attention than previously to the education of girls because of their potential contribution as wives and mothers to the welfare of the entire community. It called on the Government to provide technical and vocational training, leaving the academic side to the missions. Although the Government's responsibility for education increased rapidly after the 1920's, the missions were still continuing to provide a large share of the country's teaching staff in 1970, and in some rural areas traditional education was still playing a major role as it marked the passage from childhood into adult society and trained many who received little or no formal education.

Education in a Stratified Society

The "Devonshire White Paper" of 1923 declared officially that African interests were "paramount." [8] Such a policy, however, was prevented from being implemented for two reasons: the weakness of the Colonial Government and the pressure exerted upon the Legislative Council by the European settlers. To further the cause of these settlers, who looked upon the Africans as a source of cheap labor, the Government passed legislation prohibiting the latter from growing cash crops. Both through legislation and socioeconomic factors, Kenya developed a three-tiered racially stratified society: (1) European farmers, civil servants, and business men; (2) Asian shopkeepers and artisans; and (3) Africans working on farms owned by the Europeans or living in their own reserves. Official policy was paternalistic, talking of "trusteeship" and the "protection" of African interests, but in reality doing little to bridge the gap separating Africans from the other two racial groups.

Per-Pupil Expenditures

Kenya's four Government-supported school systems before Indepen-

[8] Great Britain Colonial Office. *Indians in Kenya* (Command, 1922). London: His Majesty's Stationary Office, 1923. p. 9.

dence consisted of separate systems for each of the major ethnic groups (African, Asian, and European) and one, concentrated largely on the Indian Ocean coastline, for the Arabs. In a rigidly stratified society these four systems could be rationalized as entirely consistent with that society's aim to prepare children for the roles they would assume as adults [9] in a particular ethnic group. During the pre-Independence period, therefore, educational expenditures per pupil vividly reflected the stratified social structure, with those for Africans less than a fifth of those for Europeans, as shown in table 1.

Table 1. Expenditures [1] of the education department and number of pupils, by ethnic group: 1926
[Amounts in U.S. dollars] [2]

Ethnic group	Expenditures		Number of pupils [3]
	Total	Per pupil	
Total	**$442,663**	**[4] $ 46.00**	**9,624**
African [5]	232,293	33.40	6,948
Asian	70,329	37.00	1,900
European	140,041	180.50	776

[1] Excluding "administrative" and "extraordinary" expenditures.
[2] At exchange rate of $4.86 per British £.
[3] In State and State-aided schools only.
[4] The average for the three ethnic groups.
[5] Includes Arabs.
SOURCE OF DATA: Kenya. Education Department. *Annual Report*, 1930. Nairobi: Government Printer, 1931, pp. 9 and 10.

Education for Africans

The Education Department's 1926 annual report followed the 1925 Memorandum's recommendation that education should develop pupils for usefulness in their own community, in government, or in farming. The 1926 report identified three groups within the African community:

1. The great mass living in villages of the Native Reserves
2. Artisans and Craftsmen
3. Members of the educated and skilled professions required by the State and by commerce [10]

The first group living in the Native Reserve villages was not to be educated in a way that would cause its members to lose interest in rural life and to yearn for town life. This group was to be taught by "Africans of high character and tactful disposition, but not of high in-

[9] The Education Commission's 1964 educational review used the phrase "caste system" to describe the rigid separation of social groups. Kenya. *Education Commission Report: Part I*. Nairobi: The English Press, Ltd., 1964. p. 21.
[10] Kenya Colony and Protectorate. *Education Department Annual Report 1926*. Nairobi: Government Printer, 1926. p. 13.

tellectual attainments," and these teachers were to be trained

> . . . to keep the education of the rural school closely in touch with rural requirements and to avoid giving village children an education which will divorce them from interest in village life and cause them to seek employment in the towns.[11]

These native African teachers "of high character and tactful disposition" were known as "Jeanes" teachers from the name of the Jeanes schools where they were trained. The first such African school was established in 1925 at Kabete about 15 miles west of Nairobi. Typically, the teachers were married couples, with the women teaching child care, health, sanitation, and similar skills and the men teaching agricultural methods and various self-help skills. Obviously, these subjects were slanted towards the pupils' expected future in self-employment or subsistence agriculture. The absence of formal literary education acknowledged the fact that only a small fraction of African children could ever utilize it for employment in industry or commerce and the fact that educational authorities responsible for policies in educating African children assumed that most Africans had a lower potential for academic learning than Europeans.

When one considers the drudgery of most subsistence agriculture and the visible advantages that follow literacy, one is not surprised that many African parents looked to the schools as the best means whereby their children could escape from rural life. As these parents observed the academic schooling given to European children and to the children of a very select few in the rural villages, they understandably came to regard agricultural, technical, and other practical subjects as second-rate, designed to keep Africans in the traditional inferior position.

Writing with more than 30 years of experience with education in Africa, V. L. Griffiths has stated that agriculture and other practical subjects in the rural African school have rarely been successful. According to him, the primary reason for their failure is "not that they ignore the needs of the rural areas, but that they ignore what parents *want* from the schools." [12]

Continuing its 1925 stand, however, the Colonial Office in 1935 issued its second major policy statement on African education, which emphasized the importance of adult education and of farmer training as part of the overall development of the entire rural community. With this policy still the official one, the Colonial Office restated it for the

[11] Ibid.

[12] V. L. Griffiths. "The Education of the Young in Rural Areas," *Education, Employment, and Rural Development* (Report of a Conference at Kericho, Kenya, in September 1966). James R. Sheffield, ed. Nairobi: East African Publishing House, 1967. p. 308.

third time in 1948.[13] Thus, despite minor changes, the British Government continued to urge that education for Africans be adapted to the needs of a predominantly rural environment.

Technical Education

Education for artisans and craftsmen would, according to the 1926 Education Department report, be organized and provided by the Government. The same report doubted that "the mental development of the African" would enable him to benefit fully from training to become a member of the educated and skilled professions required by the State and by commerce, but it did state that a small elite group was being prepared to enter these professions:

> The demand of the State and of commerce for a more highly educated class of individuals who can take their place as leaders among the Africans or within the ranks of the community as thinkers and professional workers is met at the Alliance High School, Kikuyu.

Academic Education

Created in 1926 by the Alliance of Protestant Missions, which pooled the missions' efforts to create a first-class secondary school, the Alliance High School at Kikuyu near Nairobi was for many years the only educational institution that prepared Africans for the Cambridge Overseas School Certificate. Other institutions later also prepared students for higher academic work, but Alliance remains one of the best secondary schools in Kenya.

Beginnings of Higher Education

In 1937 under the chairmanship of Bertrand Sackville De La Warr, a Government-appointed commission emphasized technical over academic education for Africans but nevertheless recommended that Makerere College in Kampala, Uganda, be elevated to university level as rapidly as possible.[15] In 1943, the Government-appointed Asquith Commission recommended that Makerere be affiliated closely with the University of London in order to train men for the public service and for professional careers.[16]

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[13] Great Britain Colonial Office. *Memorandum on the Education of African Communities* (Colonial No. 103). London: His Majesty's Stationary Office, 1943.
[14] Kenya Colony and Protectorate. *Education Department Annual Report 1926.* op. cit. p. 14.
[15] Great Britain Colonial Office. *Higher Education in East Africa* (Colonial No. 142). London: His Majesty's Stationery Office, 1937.
[16] Great Britain Colonial Office. *Report of the Commission on Higher Education in the Colonies* (Command 6647). London: His Majesty's Stationery Office, 1945.

Changes After World War II

Following World War II, the Colonial Office began to narrow the gap between policy and practice, introducing the term "partnership" to replace the rather negative paternalistic connotations inherent in the term "trusteeship." A 1948 memorandum of the Office urged that education for Africans develop a sense of "public responsibility."[17] The Office shifted its policy of Colonial self-sufficiency to one of recognizing that economic development would require outside capital and technical assistance.

Increase in British Government Grants

Although the Colonial Development Act of 1929 had granted over $9 million to African territories, significant amounts did not appear until provided by the Colonial Development and Welfare Acts of 1940, 1945, and 1950. These three acts granted a total of $400 million.[18] Under this stimulus, Kenya responded with a 10-year plan that placed considerable emphasis on economic and social development for the African community.[19]

In accord with the "public responsibility" concept, post-World War II education expanded—but with problems. For example, although 310,854 children were attending school out of an estimated school-age population of 1,216,000, over 100,000 were in unaided institutions (those lacking proper facilities and/or trained teachers). Furthermore the dropout rate ("wastage") was so severe that only 40 percent went beyond the 2d year, five percent beyond the 6th year, and less than one percent beyond the 8th year.

The Beecher Report

Appointed in 1949 by the Governor to examine the entire educational system, a committee under the chairmanship of the Venerable Archdeacon L. J. Beecher of Mombasa (in Coast Province) reported later that year on "the scope, content, and methods of the African education system." [20]

Beecher's examination of the "scope, content, and methods of the African education system" led him to make 148 specific recommendations,

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[17] Great Britain Colonial Office. *Education for Citizenship* (Colonial No. 216). London: His Majesty's Stationery Office, 1948. p. 3

[18] Lord Haley, *An African Survey*. London: Oxford University Press, 1957 pp. 1323 and 1336.

[19] Kenya Colony and Protectorate. *Ten-Year Development Programme*. Nairobi: Government Printer, 1946.

[20] Kenya Colony and Protectorate. *African Education in Kenya*. Nairobi: Government Printer, 1949.

most of which the Government accepted as a basis for its educational policies during the 1950's. The report's primary recommendation was to substitute quality for quantity as the main educational guideline. To give balance to the educational system Beecher urged the Government to make special effort to raise the quality of education at the secondary and teacher-training levels. He further urged the Government to exercise control and stricter supervision over the system as the means for breaking "the closed vicious circle [in which] . . . everything expands except control."[21]

Education for National Development

The improvements resulting from the Beecher report never really had a chance to demonstrate their merit because the winds of change which swept the African continent during the 1950's forced Kenyan educators to examine the entire basis of their policy. As one writer described the shift:

> It was from about 1957 that a new educational tempo began to be felt, accelerating slowly up to 1959 and thereafter with extreme speed. It was first felt in Kenya in about 1956 when the end of the Mau Mau Emergency stimulated the whole European community and the government in particular to accelerate the training of Africans to occupy responsible positions. Training was increased and improved, particularly for the African staff of African District Councils and in agriculture. Firms began to think seriously of taking in African management trainees.[22]

The economic need for high-level manpower began to influence and shape education to a greater and greater extent. Political factors also played a major part as education was called upon to prepare Africans for their role as responsible citizens in an independent nation. Under the Development Program for 1957–60, crash programs for Africanizing the civil service, as well as educational opportunity for all races, expanded. The Program acknowledged that Kenya's main educational problem was to "maintain" European standards, "raise" Asian standards, and "create" African standards.[23]

Education at Independence

On December 12, 1963, the newly independent Kenya inherited from

[21] Ibid. p. 12.
[22] Guy Hunter, *Education for a Developing Region: A Study in East Africa*, London: George Allen and Unwni, 1963. p. 15.
[23] Kenya. *Sessional Paper No. 77 of 1956/57*. Nairobi: Government Printer, 1957. p. 65.

the British a rigidly stratified educational system. Enrollments in 1962 are given by ethnic group for primary and secondary school pupils in table 2. One of the top priorities of the new Government was

Table 2. Number of primary and secondary school pupils (1963) and percent which each group constitutes of the corresponding school-age population (1962), by ethnic group

Ethnic group	Corresponding school-age population [1]		
	Number of pupils	Total number of children	Percent pupils constitute of total number of children
PRIMARY SCHOOL			
African	840,677	2,421,300	34.7
Arab	3,322	9,000	36.9
Asian [2]	40,915	52,800	77.5
European	6,639	8,900	74.6
SECONDARY SCHOOL			
African	10,593	829,700	1.3
Arab	292	3,100	9.4
Asian [2]	13,912	17,200	80.9
European	3,265	3,300	98.9

[1] For primary school, established at 5–14 years; for secondary school, at 15–19 years.
[2] Includes Goans.
SOURCE OF DATA: (1) Kenya. Ministry of Education. *Triannual Survey*, 1961–1963. Nairobi: The Ministry, 1964. pp. 45–49. (2) Kenya. Ministry of Economic Planning and Development. *Statistical Abstract*, 1965. Nairobi: The Ministry, 1965. pp. 6 and 11.

to unify the separate streams of that system into a coherent national plan for all Kenyans, regardless of race. Within a week after Independence, the Minister for Education appointed a commission under the chairmanship of Professor Simeon Ominde (University College, Nairobi) to review all aspects of the system. In October 1964 the Commission submitted part I of its report, characterizing the country's inherited educational system in the following words:

> This is the first national report on education in Kenya . . . . Previous reports have dealt with "African Education," or "European Education," or "Asian Education" . . . . "African Education" has always been the residuary legatee of the nation's wealth. During the ten years before Independence, more capital was invested in European and Asian education, representing 3% of the population, than in the education of the African 97%.[24]

[24] Kenya *Education Commission Report: Part I*. op. cit. p. 21.

Part I of the Commission's report identified the following educational objectives for Kenya:

1. Education is a function of the nation; it must foster a sense of nationhood and promote national unity.
2. Education must serve the needs of the people and of the country without discrimination.
3. Our public schools are an instrument of the secular state, in which no religion is privileged; but schools must respect the religious convictions of all people.
4. The nation's schools must respect all Kenyan cultural traditions that find expression in both social institutions and social relationships.
5. An excessively competitive spirit in our schools is incompatible with our traditional beliefs; it must be restrained. Every young person coming from our schools must be made to realize that he has a valuable part to play in the national life.
6. Education must be regarded and must be used as an instrument for the conscious change of attitudes and relationships, preparing children for the attitudinal changes required by modern methods of productive organization. At the same time, education must foster respect for human personality.
7. A most urgent objective of education is to subserve the needs of national development.
8. Education must promote social equality and remove divisions of race, religion, and tribe.
9. An outcome of our education at all levels must be adaptability to change.[25]

Part I of the report also made 160 recommendations for educational change and improvement.

In July 1965, the Commission submitted part II of its report following the appearance that same month of Kenya's first manpower survey.[26] Part II had 58 recommendations dealing with problems of linking educational development to the country's demand for high-level manpower.[27] Taken together, the two parts of the Ominde Commission's report were a definitive review of Kenyan education at the time of Independence. *The Ministry of Education Triennial Survey 1964–66 and Annual Report 1966* acknowledged that the Ominde Commission had produced a

[25] Ibid. p. 25.
[26] Kenya. Ministry of Economic Planning and Development. *High Level Manpower Requirements and Resources in Kenya 1964–70.* Nairobi: Government Printer, 1965.
[27] Kenya. *Education Commission Report Part II.* Nairobi: Government Printer, 1965.

"profound influence on national thinking" and stated that "many of the Commission's recommendations had already been carried out." [28]

Summarized best, perhaps, in the 1966–70 plan for developing the country, Kenya's long-range educational goals are to—

1. Provide universal primary education.
2. Ensure enough places at the secondary and higher levels to educate those with recognized abilities.
3. Organize the educational system to meet the country's manpower needs.[29]

At Independence, Kenya obviously did not have "enough places" for students in higher education. Several thousand Kenyans were in fact studying overseas, but since the Government did not know who they were or where and what they were studying, it could not appraise their potential for helping to build a new Kenya when and if they returned home from their studies. In 1962–63, Kenyans who had not gone overseas for higher education but who had remained in East Africa for this purpose and were studying at the University of East Africa numbered only 471, and of these only 243 were at University College, Nairobi.[30]

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[28] Nairobi: Government Printer, 1967. p. 2.

[29] Kenya. Ministry of Economic Planning and Development. *Development Plan 1966–70.* Nairobi: Government Printer, 1966. p. 305. (The Government expressed similar sentiments in its *African Socialism and Its Application to Planning in Kenya.* Nairobi: Government Printer, 1965.)

[30] Kenya. Ministry of Education. *Annual Report 1967.* Nairobi: Government Printer, 1968. p. 77.

Structure and Administration

In view of the fact that the small tribes in Kenya feared they would be dominated by the Kikuyu and Luo tribes, the constitutional conference held at Lancaster House (London, England) in October 1963 left responsibility for education largely in the hands of the seven Provincial assemblies.[1] Having achieved independence, Kenya in December 1963 was faced with an enormous triple challenge: meet popular demand for primary schools, produce enough intermediate and high-level manpower to Africanize the civil service, and unify a country divided into factions having diverse interests and traditions.

Since local authorities were unable to cope with the administrative burdens imposed by the regional constitution, the Republican Constitution effective December 12, 1964 returned full responsibility for education to the Central Government. In February 1965, however, an order retroactive to December 12, 1964 gave the Minister of Education greater executive powers, including the power to entrust primary education, after all, to local authorities.

The Education Act of 1968 updated and consolidated all existing educational legislation and regulations and clearly specified the legal framework within which local authorities and school committees (boards of education) were to function. The Act clarified the division of responsibility between local authorities (to whom it delegated certain duties such as establishing schools and hiring staff) and the Minister of Education (in whose hands it retained certain duties such as establishing national standards and making inspections of schools to ensure that they met those standards).

The President of the country appoints the Minister of Education from among the members of Parliament. Normally, the Minister has two Assistant Ministers, who in the Minister's absence represent him in Parliament or at public functions. The Minister also has a Permanent Secretary, who is the Ministry's senior civil servant and its chief admin-

[1] Great Britain Colonial Office. *Kenya: Independence Conference 1963* (Command 2156). London: His Majesty's Stationery Office, 1963. p. 17.

istrative officer. Chart 1 shows the structure of the Ministry of Education.

Educational Planning

In 1964 the Ministry of Education established a Planning and Statistics Unit to collect and analyze educational data and to project enrollments and costs for planning purposes. Educational expenditures came to be regarded as an investment in the Nation's economic development and an integral part of it. The Development Plan 1966–70, the Manpower Survey, the Sessional Paper on African Socialism, the Ominde Commission's Report, and the negotiations with the International Bank for Reconstruction and Development (generally known as World Bank) for a $7 million International Development Association (IDA) loan for secondary education—all these taken together linked educational development with overall national development.

As the Ministry of Education described education's new role—

> . . . [it] was to be considered less of a service to individuals and more as a service to the State through the production of engineers and teachers, doctors and agronomists, mechanics and secretaries, and all other skilled people in short supply.

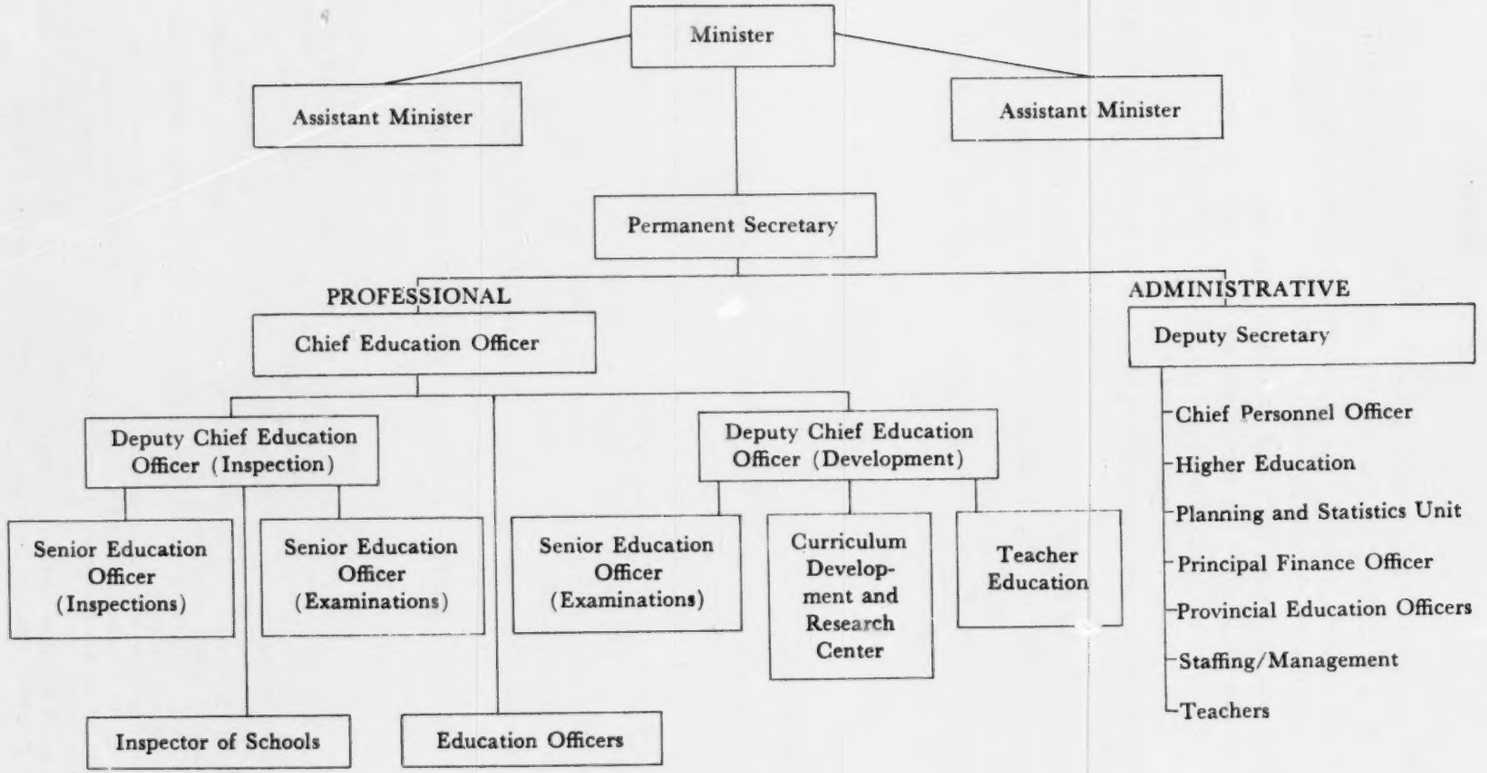
Sessional Paper No. 10, *African Socialism* (p. 40), makes this quite clear:

> At Kenya's stage of development, education is much more an economic than a social service. It is our principal means for relieving the shortage of domestic skilled manpower and equalizing economic opportunities among all citizens.[2]

In both its qualitative and quantitative projections (through referring frequently to the Manpower Survey and to requirements other than those of the schools), the Development Plan 1966–70 reflected this orientation of education to Kenya's economic needs.[3] This is not to imply, however, that the Ministry of Education's priorities and plans always coincide with those of the Ministry of Economic Planning and Development. Like other countries, Kenya finds it must reconcile conflicting vested interests among its Government departments through compromise. It finds centralized control necessary in order to ensure that development will follow national priorities, thus avoiding such unplanned development as the opening of an unauthorized self-help

[2] Kenya. Ministry of Education. *Annual Summary 1965*. Nairobi: Government Printer, 1966. pp. i and ii.
[3] Kenya. Ministry of Economic Planning and Development. *Development Plan 1966–70*. Nairobi: Government Printer, 1966 pp. 305–11.

Chart 1. The Ministry of Education



("Harambee") school, which would draw funds from investment sources that might serve the country better if spent for something else.

As officially organized, Kenya's national planning machinery includes representatives from the Provincial administration and from most ministries and departments.[4] The National Plan cannot, however, always reflect the feelings of all ministries and departments; nor can they in turn always implement the Plan's targets.[5] Nevertheless, neither side regards the Plan as rigid and unyielding, but rather as something to be continuously revised and updated in line with Kenya's rapidly changing needs.[6]

Although the educational system's content has been considerably adjusted to reflect the changing needs of an independent nation, the structure remains basically the same as is found in most former British territories. In 1966, Kenya's primary schools completed their shift from an 8-year to a 7-year course.

Primary Education

Jurisdiction

In the city of Nairobi and in each of the country's seven Provinces primary education falls under the jurisdiction of a Ministry-appointed Provincial Education Officer—except in North-Eastern Province, where Kenya was involved for several years in a guerrilla struggle with bandits of Somalia origin.[7] Below the Provinces, county councils and local school committees have been delegated responsibility for running most primary schools. (A number of church missions and private companies have their own schools, but little real autonomy to administer them.)

At the county level, a County Education Officer is assisted by Educa-

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[4] Ibid. pp. 10 and 11.

[5] The Plan's only specific targets were for maintained and assisted secondary schools. Since these schools were part of the World Bank's $7 million IDA loan, little opportunity existed for growth to vary significantly from the targets (the Plan, p. 308). To this extent actual school development has followed the Plan. When financing depends on local resources, however, as it does for primary schools and "Harambee" secondary schools, plans have relatively little influence on what actually happens. (For a discussion of Harambee schools, see subsection The Harambee School Phenomenon.)

[6] Kenya. Ministry of Economic Planning and Development. *Development Plan 1966–70*. op. cit. p. 3.

[7] In September 1967, when the dispute between Kenya and Somalia was then 4 years old, the two countries accepted a mediation offer by President Kaunda of Zambia, made during the course of a conference sponsored by the Organization of African Unity (O.A.) and held in Kinshasa, capital of the Democratic Republic of the Congo. Thereafter, mediation progressed steadily and on January 31, 1968, the two countries resumed their previously severed diplomatic relations.

tion Officers and Assistant Education Officers, their number depending on how many schools he has in his county. The County Education Officer is actually employed by the Ministry of Education, but his assistants are employed by the Teacher Service Commission with the approval of the local school committees.

Effectiveness of Local School Committees

In a 4-day, August 1966 seminar, staff members from the Ministry of Education and Education Officers and their assistants from the counties concluded that local school committees were generally effective in carrying out the following types of duties:

1. Advising the County Education Officer on—
   Expenditure of school funds.
   Remission of fees to particularly needy children.
2. Campaigning for larger enrollments when necessary.
3. Controlling admissions on the basis of parents' contributions.
4. Erecting buildings and providing equipment.
5. Fostering good relationships among the Education Officers, and headmasters, teachers, and parents.

The seminar participants also concluded, however, that despite the admirable performance of some county councils, most local school committees did not carry out their responsibilities adequately. They realized, though, that the primary schools' basic difficulty is their uncertain revenues and the political nature of the local school committees.[8]

The "Leavers"

Primary school pupils who either drop out before the end of the 7-year course or who, having finished it,[9] do not enter a secondary school are rising in number throughout Africa. A chronic problem for them is that they are unable either to find jobs, or, for lack of "places," to be admitted to a secondary school.[10]

In Kenya, primary school "leavers" have aroused considerable attention. The exact nature of their predicament, however, is not certain. A

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[8] Kenya. Ministry of Education. *Report of Education Officers' Conference Held at the Kenya Institute of Administration in Kabete August 22–25, 1966.* pp. 7–9. (mimeograph). For a detailed analysis of the financing and administration of primary education, see—L. Gray Lowan, "The Lust of Learning." New York: Teachers College Press, 1970.

[9] The Kenyan pupil who finishes primary school is called a "leaver" (as in British terminology) rather than a "graduate" (as in U.S. terminology). He is a "leaver" from primary school regardless of whether he does or does not enter secondary school. Normally, a "graduate" is one who has finished university.

[10] See "Unemployment Among African School Leavers" by Archibald Calloway in *The Journal of Modern African Studies,* 1:3, September 1963.

1966 study of their employment and training [11] identified a gap of both years and skills during which dropouts are caught in a no man's land between the traditional agriculture of their parents and the life of wage employment which their schooling had led them to expect.[12] A survey of pupils 2½ years after they had taken the required Kenya Preliminary Examination (K.P.E.) in 1964 (at the end of their primary schooling) revealed that more than 50 percent of the group were still going to school or were taking some form of training and that 18 percent were employed.[13]

Many observers believe that the percent of secondary school places available to primary school "leavers" is a more serious problem than the problem of "leavers" per se. Averaging 9 percent in 1968, the availability of places has improved somewhat during the past few years, but one must bear in mind that approximately half of form 1 students attend unaided schools, many of which have far lower standards than maintained and assisted schools.

The percent of form 1 places available in 1968 to primary school "leavers" varied considerably throughout the country: [14]

Province or district	*Percent*
Central	7.1
Coast	18.6
Eastern	6.7
North-Eastern	35.0
Nyanza	6.6
Rift Valley	8.9
Western	9.1
Nairobi Extra-Provincial District	36.9

Well aware of the forces which cause primary school enrollments to outrun places in maintained and assisted secondary schools and opportunities in wage employment, the Ministry of Education holds the view that some education is better than none at all. Granted that even an incomplete primary education will lead to a more productive citi-

[11] Christian Council of Kenya and Christian Church Educational Association. *After School, What?* Nairobi: Ministry of Health, 1966.

[12] John Anderson. "The Adolescent in the Rural Community" in *Education, Employment, and Rural Development,* James R. Sheffield, ed. Nairobi: East African Publishing House, 1967.

[13] Lewis Brownstein. *Preliminary Results of a Survey of 1964 K.P.E. Candidates in Embu, Kitui, Kericho, and Nyanza* (Discussion Paper No. 58). November 1967. (unpublished)

[14] Kenya. Ministry of Economic Planning and Development. *Development Plan 1970–74.* Nairobi: Government Printer, 1970. p. 459.

zenry,[15] the critical issue is twofold: (1) Is the investment (totaling about $150 per pupil for the entire 7 years) the most productive use of funds? (2) Will the unemployed school dropout become a progressive force or an unstable element in society? Not only the Ministry of Education, but the entire Government of Kenya, must face this issue and find the answers.

Secondary Education

Racial Integration

One of the Ministry of Education's greatest challenges at Independence in December 1963 was the task of forging a unified national education system from the four racially separate systems for Africans, Arabs, Asians, and Europeans. As recently as 1958 a report on education for Asians and Europeans in Kenya [16] did not foresee that the days of these separate systems might be numbered. However, by 1967, 4 years after Independence, the rate of Africanization had increased to the point where the proportion of Africans in secondary schools was 82 percent as contrasted to only 37 percent in 1963.

Owing to the high fees charged by the former Asian and European boarding schools, the chief barrier to racial integration in those schools was economic rather than administrative. Thus, the Ominde Commission commented that the requirement at these schools of a school uniform, their lower age limit for admission, and the high standard of the food they served all added to the difficulty of integrating them. Recognizing that the costs of integration were prohibitive for the time being, the Commission urged that standard fees be a long-term goal for all secondary schools.[17] It also discussed the possibilities and problems of integrating high-cost secondary schools into a national system.[18]

The Ministry of Education began to give more and more scholarships ("bursaries") to Africans and it made grants to high-cost boarding schools to enable them to remit the fees of deserving students. In January 1967 the Ministry announced that from then on the new students in all schools must be composed of at least 50 percent Africans. This requirement further accelerated the integration process.

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[15] "Productive" not only as enlightened voters, but also as farmers rising above subsistence agriculture. See *Transforming Traditional Agriculture* by Theodore Schultz. New Haven: Yale University Press, 1964. p. 201.

[16] Kenya. *Report on Asian and European Education in Kenya 1958*. Nairobi: Government Printer, 1958.

[17] Kenya. *Education Commission Report Part I*. Nairobi: The English Press, Ltd., 1964. pp. 29–32.

[18] Kenya. *Education Commission Report Part II*. Nairobi: Government Printer, 1965. pp. 13–20.

Management of Maintained and Assisted Schools

Since the December 1964 Republican Constitution, secondary education in Kenya has been the National Government's responsibility. All maintained and assisted schools—i.e., those receiving Government grants-in-aid—are managed by Boards of Governors. The Minister of Education appoints the chairman. In addition, he appoints most of the Board members—usually from the local community and from appropriate groups such as cooperative associations, businesses, and churches. Representative of such memberships is the Board of Governors for Alliance High School, Kenya's oldest and best known secondary school for Africans, located about 15 miles west of Nairobi. (Alliance was so named because of its founding by an alliance—of the Church Missionary Society (Anglican), the Church of Scotland Mission (Presbyterian), the Methodist Church Mission Society, and the Society of Friends.)

Having the school's headmaster among its members as a matter of course and looking to Kenya's Attorney General as its chairman, Alliance's Board of Governor's is otherwise composed of 13 more members representing the groups indicated:

Group		*Number of members*
Type	*Name*	
Alumni of Alliance High School	Graduates' Association	2
Businesses	Central Bank of Kenya (The Governor)	1
	Shell British Petroleum (Kenya) (The Personnel Manager)	1
Churches	African Inland Church	1
	Anglican Church	1
	Methodist Church	1
	Presbyterian Church	1
	Society of Friends	1
Governments	*Kenya*	
	Ministry of Education (The Assistant Minister)	1
	Ministry of Natural Resources (The Permanent Secretary)	1
	Nairobi	
	City Council (An Alderman)	1
Higher Education	University College, Nairobi	1

The Board of Governors of each maintained and assisted school regulates student admissions and dismissals and is responsible for its school's financial matters—subject to the Minister of Education's guide-

lines which it receives from the Minister's Chief Education Officer. The Board's responsibilities for staff are limited to those concerning non-teaching staff.

Growth of Unaided Schools

Kenya's success with locally supported (sometimes called "self-help" or "Harambee") secondary schools that receive no Government aid is unmatched by any other African country. The number of unaided schools, including the so-called Harambee ones, totaled 32 in 1963 and 68 in 1964. In 1966–68 the unaided and other secondary schools numbered as follows:[19]

Year	*Unaided*	*Maintained and assisted*
1966	201	198
1967	[20] 361	206
1968	369	232

Unaided schools, like those that are Government-maintained and assisted, must register with the Ministry of Education before they can open. Some unaided schools meet the Ministry's minimum requirements for financing and siting; others do not.

The Harambee School Phenomenon

In the opinion of the Ominde Commission, buildings, funds, and teachers that otherwise might have gone to primary schools were often diverted to Harambee schools. The Commission also expressed concern that Harambee secondary schools would exploit parents by providing a low-quality but high-cost substitute for maintained and assisted schools.[21] Thus, the Harambee schools (and certain other private ones) have been able to charge as much as $120 or more per year per child in fees as opposed to $65 in Government-approved boarding schools and $28 in Government-maintained and assisted day schools.

Few of the private schools have proper equipment and textbooks or well-trained teachers. Yet parents demonstrate their willingness to send their children there in the hope that somehow the mere fact that the

[19] Kenya. Ministry of Education. *Annual Report 1968.* Nairobi: Government Printer, 1969. p. 48.

The "Harambee" unaided schools came into existence as a result of parents joining or "pulling" together to build and supply self-help schools to fill the void caused by the rapid expansion of primary education and the increasing demand for secondary school places.

[20] Of the 361 unaided schools, 247 were considered Harambee; the other 114 were commercial, private, tutorial, or special religious ones. John Anderson. *Education for Self-Reliance—The Impact of Self-help* (Discussion Paper No. 67 dated September 1968 at University College, Nairobi). (unpublished)

[21] Kenya. *Education Commission Report: Part I.* op. cit. pp. 72–74.

children have attended the schools will enable them to get wage-paying jobs in the country's modern sector.

The private schools' popularity with parents has led politicians to sponsor private schools of various types. The Ministry of Education has thus found it difficult to enforce the closing down of unauthorized schools and has gradually changed its official attitude from disapproval to support.

The Ministry's support manifested itself in the appearance of the Minister at an August 1966 conference for headmasters of Harambee schools to deliver the opening address. Other Ministry officials, as well as teachers from Alliance High School, offered the headmasters advice on curriculum, examinations, and textbooks; and practical help on some of the financial and administrative problems of running a school.[22] Providing this advice and help seemed to the Ministry to serve a useful purpose as did its attempt to integrate the Harambee schools into the country's secondary school system. At the time, in August 1966, the Ministry could not, however, assume any financial responsibility for these schools.

In 1967 the Ministry announced plans to take into the aided secondary school system, as part of the Development Program, some 80 Harambee schools. The Ministry's radio/correspondence courses and inservice training for teachers, now in motion, will help Harambee as well as other schools. Although Harambee schools have helped to ease the pressure for more schools, the poor quality of many of these self-help enterprises merely postpones for a few years the problem of unemployed, semieducated youths.

Technical Education

Secondary Trade Schools

Kenya's nine secondary trade schools are run cooperatively by the Ministries of Education and Labor. As recommended by an International Labor Organization report to the Kenya Government,[23] the former 2-year course for artisans was lengthened and upgraded to 3 years and the former 3-year course for junior technicians to 4 years. After passing the appropriate Government trade test (there are 40 such tests), a student can enter an apprenticeship program in industry; or, at the Kenya Polytechnic or the Mombasa Technical Institute, he can take technician-level training. Such training leads to the City

[22] John Anderson. *Report of the Conference of Harambee School Headmasters, August 10–14, 1966,* (at University College, Nairobi). (unpublished)

[23] *Report to the Government of Kenya on the Development of Vocational Training.* Geneva: International Labor Organization, 1965.

and Guilds Institute Examinations (United Kingdom). As of 1968, 4,425 students were attending technical and trade schools; and four of the nine trade schools (at Mombasa, Nairobi, Nakuru, and Sigalagala) were giving training that aimed, among other things, to prepare their students to take and pass the Cambridge Higher School Examination.

Kenya Polytechnic

Government and industry demand for technicians, together with a loan from the U.S. Agency for International Development and staff and equipment (through UNESCO) from the U.N. Special Fund, has caused Kenya Polytechnic to plan to increase its 1965 enrollment of 1,600 to 3,000 in 1974.

Kenya Polytechnic's 1970–71 prospectus reveals that students may register in Preliminary Technical Courses, Technical Teacher Training, and the following Departments: [24]

Business Studies	Engineering
Catering	Printing
Building and Civil Engineering	Science

The 1970–71 academic year offers the following full- or part-time courses:[25]

Accounting	Pre-Marriage (Girls)
*Agricultural Mechanics and Technicians	Printing Technical Knowledge
*Building Supervisors (Junior)	*Process Camera Work and Lithographic Platemaking
*Catering Assistants	Secretarial (Advanced)
Cooking for Pleasure (Housewives)	Secretaryship (Company)
*Hotel Housekeepers	*Structures (Advanced)

*Requires employer sponsorship.

On its Board of Governors Kenya Polytechnic has representatives from University College's engineering faculty and from private industry so that their counsel may help the school fit its courses into those at the University College and the secondary technical schools and make these courses meet the needs of the changing job market.

Enrollments: Primary and Secondary Schools

Kenya's secondary school enrollment expanded from 1961 to 1968 to a greater degree than its primary school enrollment, as revealed by the

[24] *East African Standard*, January 30, 1970. p. 19.
[25] Ibid.

tabulation below, which shows enrollment at certain points during those years as a percent of the 1961 figure:

	1961	*1963*	*1965*	*1967*	*1968*
Total	1.0	1.03	1.22	1.37	1.47
Primary	1.0	1.02	1.20	1.30	1.39
Secondary	1.0	1.36	2.16	4.01	4.57

On the other hand, the primary school enrollment during every year of the same period far surpassed that of the secondary school, as shown in table 3.

The following conditions or events during 1961–67 help explain the enrollment figures for these years.

1. In 1961–62, 4-year intermediate schools (composed of standards IV through VIII) were abolished. The entire standards I through VIII then became a continuous 8-year primary school system.
2. After 1964, the primary school system was reduced from 8 to 7 years.
3. The 1963 increase in primary school fees resulted in a temporary decline in primary school enrollment.
4. After 1964, Harambee (self-help) schools became a significant factor in the secondary school system. Chart 2 shows the total number of girls and boys in assisted, maintained, and unaided schools for 1963–64.
5. The increase in the number of Harambee schools has naturally provided an increase in the number of secondary school "places" so that the chances for a pupil who finishes primary school (a "leaver") to be admitted to a secondary school are improved. Thus, the ratio of form 1 places to standard VII "leavers" is better than before.
6. The dropout rate was extremely serious. Table 4 shows the 1956 enrollment in standard I and the enrollment in each succeeding year in each succeeding standard and form up to 1967. In 1960 the drop in standard V was occasioned by the earlier division between the 4-year primary and the 4-year intermediate schools—a competitive selection point which also caused the bulge of repeaters in standards III and IV.

Teacher Education

Teacher-Training Institutions

Primary School Teachers.—Training for primary school teachers takes place at teachers colleges, which in 1968 numbered 24 and which

Table 3. Number of pupils in primary schools, by standard, and number in secondary schools, by form: 1961-68

[..... indicates source gave no data]

Standard or form	1961	1962	1963	1964	1965	1966	1967	1968
Grand total	**892,615**	**962,352**	**921,673**	**1,050,640**	**1,090,122**	**1,106,609**	**1,221,958**	**1,311,041**
Standard				PRIMARY				
Total	*870,448*	*935,766*	*891,553*	*1,014,719*	*1,042,146*	*1,043,416*	*1,133,179*	*1,209,680*
I	189,958	169,990	137,220	180,290	195,733	193,909	228,769	250,757
II	168,572	166,270	138,678	144,786	165,754	166,110	183,634	207,755
III	163,313	164,972	143,907	139,727	139,285	152,919	165,640	178,537
IV	171,071	165,716	140,005	145,004	135,124	130,282	146,912	158,899
V	75,457	128,726	124,644	134,031	126,428	120,850	124,832	132,701
VI	44,058	70,747	112,836	122,603	122,517	132,714	135,848	134,247
VII	35,525	41,972	62,510	114,408	121,269	146,192	147,544	146,784
VIII	22,494	27,373	31,753	33,870	36,036	440	.....	.....
Form				SECONDARY				
Total	*22,167*	*26,586*	*30,120*	*35,921*	*47,976*	*63,193*	*88,779*	*101,361*
1	7,245	9,093	10,214	12,712	19,015	24,108	31,805	35,621
2	5,587	6,883	8,174	9,122	12,566	18,503	25,592	28,467
3	4,586	5,275	5,829	7,035	7,760	11,210	16,880	19,547
4	3,953	4,320	4,791	5,625	6,784	7,068	10,756	14,565
5	513	656	667	864	1,130	1,356	1,622	1,769
6	283	359	445	563	721	948	1,124	1,389

SOURCE OF DATA: Kenya. Ministry of Education. *Annual Report 1967* and *Annual Report 1968*. Nairobi: Government Printer, 1968 and 1969, respectively. pp. 65 and 80 respectively.

Table 4. Number of pupils in standard I (primary school) in 1956 and number in each succeeding standard and form (secondary school) from 1957 to 1967, and percent the number constitutes of the previous year's enrollment and of standard I's 1956 enrollment.

Standard or form	Year	Number of pupils	Percent of previous years' enrollment	Percent of standard I's 1956 enrollment
Standard		**PRIMARY**		
I	1956	142,045	....	100.0
II	1957	118,509	83.4	83.4
III	1958	120,752	101.9	85.0
IV	1959	135,292	112.0	95.2
V	1961	45.384	97.1	31.0
VI	1961	44,058	97.1	31.0
VII	1962	41,972	95.3	29.5
VIII	1963	31,753	75.7	22.4
Form		**SECONDARY**		
1	1964	12,712	21.2	8.9
2	1965	12,566	98.9	8.8
3	1966	11,210	89.2	7.9
4	1967	10,756	95.2	7.6

SOURCE OF DATA: Kenya. Ministry of Education. *Annual Report* 1967. Nairobi: Government Printer, 1968. p. 85.

in 1974 are to be reduced to 17; or at University College, Nairobi, where the Department of Education produced "graduate" teachers with a bachelor's degree in education and offered a 1-year postgraduate diploma course for untrained graduates.

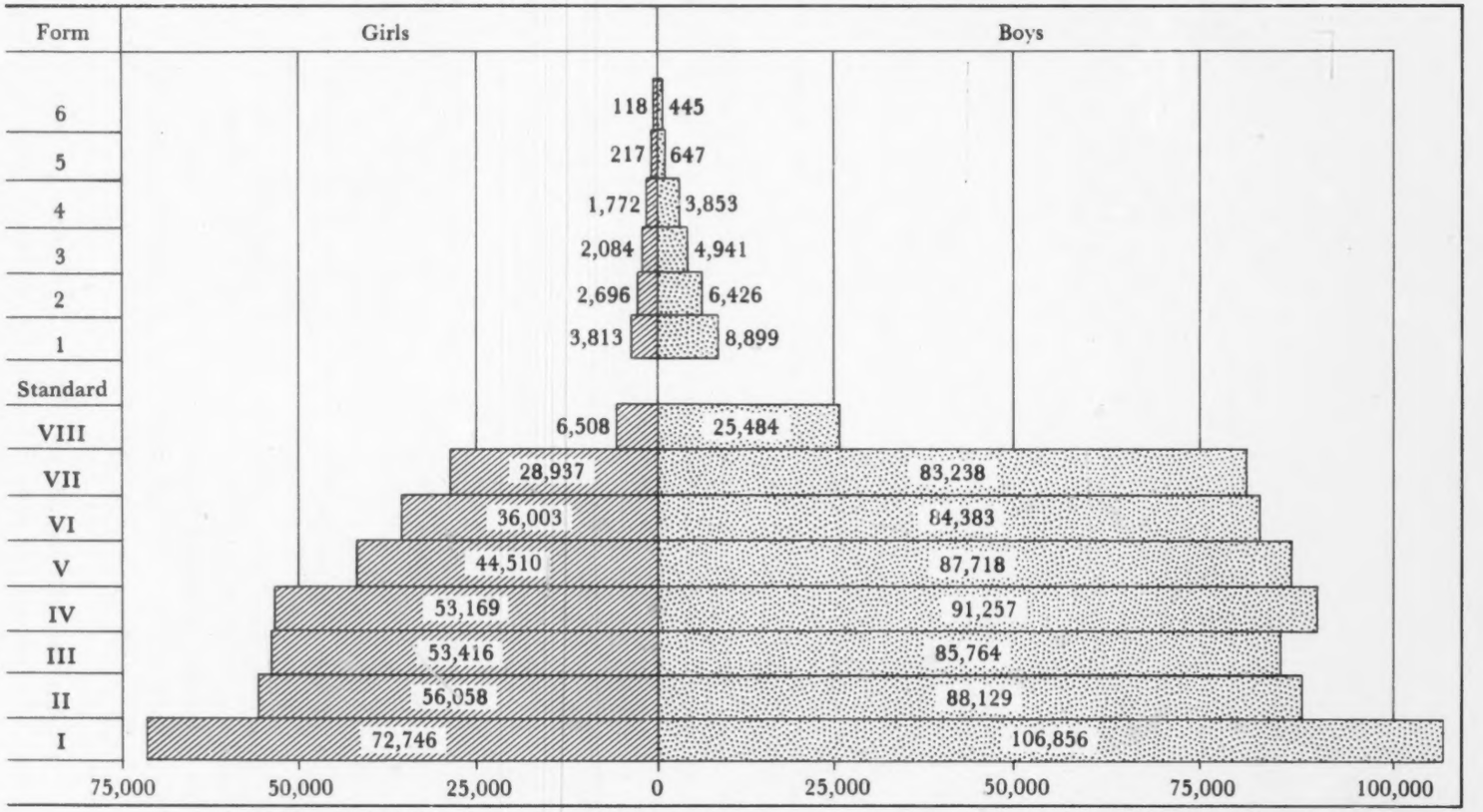
Like secondary schools, teachers colleges are administered by Boards of Governors representing missionary bodies and other local organizations, but for financing and curriculum they are controlled by the Ministry of Education.

The 24 teachers colleges offer 2 years of training at three levels, depending on the student's previous schooling:

Level	*Previous schooling*
P-1	Through form 4 and possession of the Cambridge School Certificate
P-2	2 years of secondary school at least
P-3	Through the Kenya Preliminary Examination

Of the total 1968 teachers college enrollment, shown in table 5, 90 percent were in primary teacher training and 50 percent of these had never attended secondary school.

Chart 2. Total number of girls and boys in assisted, maintained, and unaided schools: 1963–64



SOURCE OF DATA: International Bank for Reconstruction and Development (unpublished working pages).

Table 5. Number of students in 24 teacher-training collges, by training level: 1968

Training level	Year in college	Number of students
Total		**6,634**
S–1	(1)	52
S–1	1st	302
	2d	234
	3d	205
P–1	1st	550
	2d	346
P–2	1st	1,080
	2d	1,000
P–3/–4	1st	1,463
	2d	1,298
P–1/S–1	(2)	92
(3)	(3)	9

[1] In reality, this is a post-high school year.
[2] Teachers who have had P–1 and S–1 level training enroll for an upgrading course.
[3] Students being trained to teach the deaf are enrolled in various courses.
SOURCE OF DATA: Kenya. Ministry of Education. *Annual Report* 1968. Nairobi: Government Printer, 1969. p. 73.

Secondary School Teachers.—If they are not university graduates, secondary school teachers, who are known as "S–1" teachers, receive their training at Kenyatta College or at Kenya Science Teachers College (KSTC). Formerly a British Army barracks at Kahawa in Nairobi Extra-Provincial District, Kenyatta College now houses both a teacher-training institution and an upper secondary school in the extensive facilities which were handed over to the Government of Kenya in December 1964.

Kenya Science Teachers College got underway in 1966 in temporary facilities; in 1968 it moved to its present site 8 miles west of Nairobi. This institution owes its existence to the Government of Sweden, which contributes 90 percent of the college's estimated $4-million capital cost, staffs the college, and until 1975 will provide 70 percent of its recurrent costs. All this adds up to Sweden's largest single foreign aid effort. The complexities of such aid programs are amply illustrated in the mere fact of the diverse representation on KSTC's Board of Governors: Among other members the Board includes the Swedish Ambassador to Kenya, representatives from Sweden's University of Uppsalla, and representatives from University College, Nairobi and the Kenya Ministry of Education.

In cooperation with Kenyatta College, KSTC offers a 3-year course to students who possess the School Certificate (received after 11 years of

school). Kenyatta College also offers a 1-year course to students who possess the Higher School Certificate (received after 13 years of school).

Radio/Correspondence Instruction for Primary School Teachers

Beginning in February 1968, postprimary educational opportunities have been offered five times a week over Kenya's radio station VOK (the Voice of Kenya) for persons, mostly teachers, who are unable to attend full-time secondary educational institutions. Developed under a team composed of representatives from the Kenya Government and US/AID, the instruction will ultimately cover seven subjects—biology, English, geography, history, Kiswahili, mathematics, and physical science. These subjects normally comprise the Kenya Junior Secondary Examination, in which Kenya's "P–3" teachers must pass at least five subjects in order to qualify for the next higher classification, "P–2."

Course Content.—Thirty-six study-guide lessons (12 per term) make up a year's work in each subject. About half the lessons require the student to turn in written assignments; the other half provide him with self-testing exercises.

1970 Enrollment.—The radio/correspondence courses enrolled the following numbers of students in 1970: *English*—1,711; *geography*—917; *history*—794; *mathematics*—1,711.[26]

Institutional Development.—The radio/correspondence project has also helped the Kenya Government to establish and develop an appropriate unit in the Adult Studies Department, University College, Nairobi to carry on the broadcast and correspondence lessons after the project ends. Such a unit was to have professional sections for writing study guides, preparing radio broadcasts, editing correspondence notebooks, and marking lessons.

Radio Programs for Students in Teacher Education Colleges

In 1968, the Voice of Kenya also broadcast a series for students in teacher education colleges on the organization of education in Kenya, the principles and theory of child study and education, and the teaching of arithmetic and reading. Programs for teachers already in service increased in number, helped by the Historical Association of Kenya and the Kenya Science Teachers Association.

The Kenya Institute of Education

Responsibility for coordinating all teacher education is vested in the

[26] U.S. Department of State. *US/AID Project Radio/Correspondence Education Monthly Report: 5 March 1970.* p. 2. (unpublished)

Kenya Institute of Education (K.I.E.). This Institute was established in April 1964 after a conference about educational institutes held a Mombasa and sponsored by the University of East Africa and the three affected Ministries of Education in Kenya, Tanzania, and Uganda.[27] At that time, Tanzania and Uganda each had an Institute of Education under the aegis of the Faculty of Education at its University College; Kenya then had neither a Faculty of Education at its University College nor an Institute of Education. Accordingly, Kenya's Ministry of Education undertook to establish such an institute.

The Kenya Institute of Education aims to develop effective cooperation among the teachers colleges, the University College, and the Ministry of Education. The Institute's functions, specified in its constitution, are to—

1. Administer a system of examinations on behalf of the Ministry of Education and make recommendations for the Teacher Certificate awards.
2. Be a center of professional activity for teachers, Government officers, and others in educational work.
3. Promote and provide for conferences and inservice courses for teachers and others engaged in or intending to engage in educational work.
4. Arrange for lectures, lecture courses, demonstrations, and the like for member institutions; and for interchange of teachers among institutions.
5. Promote educational research, secure publication of the results, and foster educational practice improvements.
6. Provide advisory services to government and nongovernment organizations as requested from time to time by the Minister of Education.[29]

The Institute's 25-member Board of Delegates consists of the following: a chairman (he is the Chief Education Officer in the Ministry), five others from the Ministry, five from former University College, Nairobi, 10 from teacher-training colleges, two from the Kenya National Union of Teachers, and two from voluntary agencies.

The Institute's professional staff consists of the following: four Edu-

[27] See *A Report of the Conference on Institutes of Education, January 27–30, 1964, at Mombasa, Kenya* by Arthur J. Lewis and L. V. Lieb. (mimeograph) (The 1968 Education Act confirmed the Institute's official status.)

[28] University College, Nairobi started a small Department of Education in 1965.

[29] Kyale Mwendwa. "Kenya Institute of Education" in *Teacher Education Bulletin.* Nairobi: Equatorial Publishers, 1967. p. 30.

cation Officers and five Canadian educators supplied by the Canadian Government. The Canadians form a team responsible for directing and giving inservice training courses to teachers and headmasters.

The Institute's research responsibilities are carried out through its Curriculum Development and Research Center (p. 74) and through panels of subject matter experts who continuously review curriculum content and materials in their respective subjects.

The Teachers Service Commission

Responding to mounting demands from the Kenya National Union of Teachers (K.N.U.T.) for higher salaries and better conditions of service, Parliament in January 1967 established a Teachers Service Commission. Appointed by the Minister of Education, the Commission is empowered "to recruit and employ registered teachers (both primary and secondary), to assign teachers to any public school, to promote or transfer any such teacher, to terminate the employment of any such teacher." [30]

Although having the powers just quoted, the Teachers Service Commission must get from the Minister of Education regulations which he makes concerning qualifications which teachers must possess in order to be registered with the Commission and in order to be appointed to the various grades. A Teachers Service Appeals Tribunal, established by the Teachers Service Commission Act and appointed by the Minister, is available to any teacher after the Commission has notified him of disciplinary action.

A Teachers Service Renumeration Committee, established by the act and appointed by the Minister (from nominations sponsored by the Teachers Service Commission and the Kenya National Union of Teachers) reviews teacher pay scales and makes recommendations concerning them to the Minister.

Money for secondary teachers' salaries comes from Ministry of Education grants to the Teachers Service Commission. Money for primary teachers' salaries comes from local authorities "on behalf of the Commission"; but whenever a local authority fails to pay any teacher, the Commission will pay him and later collect (with interest) from the local authority or from the Ministry of Local Government. Thus, everyone concerned seems to concede that the Commission has given the teaching profession in Kenya the financial security which it badly needed.

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[30] Kenya. *The Teachers Service Commission Act 1966* (No. 2 of 1967). p. 3.

Higher Education

The development of a system of higher education in Kenya evolved over a period of some 30 years. The actual institution itself has successively borne the names (1) Royal Technical College of East Africa, (2) Royal College, Nairobi, (3) University College, Nairobi (as one of the three components of the University of East Africa), and (4) University of Nairobi.

Royal Technical College of East Africa

The 1940, 1945, and 1950 Colonial Development and Welfare Acts provided the stimulus for the Kenya Government to translate educational policy declarations into practice. In 1947 the Government stated that the country needed a technical and commercial institute and in 1951 it obtained from Great Britain a Royal Charter to establish the Royal Technical College of East Africa in Nairobi. Building funds for this college came from Colonial Development and Welfare funds and from Asians throughout East Africa, who donated $850,000 for the purpose, diverting this sum from funds they had been raising to start an academy of arts, science, and commerce as a memorial to Mahatma Gandhi. In 1954 the fund raising culminated in the Gandhi Memorial Academy, which the East African High Commission[31] incorporated into the Royal Technical College of East Africa. The East Africa Asians were further rewarded for their donations when the Gandhi Memorial Academy Society received representation on the governing council of the College.[32]

Royal College, Nairobi

In 1961, following a trend already established in West Africa, the East African High Commission upgraded the Royal Technical College to university level, renaming it Royal College, Nairobi. Thus transformed, the institution (like Makerere University College at Kampala, Uganda) began preparing its arts, engineering, and science students for the University of London's "external" degree.[33] Both institutions con-

[31] The East African High Commission came into existence on January 1, 1948, as a result of Colonial Paper No. 191 of 1945. This Paper had proposed an interterritorial legislature for Kenya, Tanzania, and Uganda to deal with such matters of common interest to East African territories as air transport and civil aviation, currency, customs and excise, defense, higher education, income-tax administration, meteorology, posts and telegraph, and research and statistics. In June 1961 the East African High Commission became the East African Common Services Authority which in turn became the East African Community.

[32] University of East Africa. *University College, Nairobi Calendar 1966–67*. p. 30.

[33] This opportunity for students to study for a degree and ultimately to become university graduates was created in spite of the fact that the need for university graduates was far less than the need for subprofessional and middle-level manpower. (This differential remains true today.)

tinued, however, to prepare their architecture, art, and commerce students for the college [34] diploma only; and their students seeking certain professional careers for admission to appropriate institutions such as the Royal Institute of Chartered Surveyors in London. Royal College continued to prepare its domestic science students for admission to the University of Manchester.

University College, Nairobi

In 1963, Royal College, Nairobi changed its name to University College, Nairobi in the same year that it (under its new name) joined with University College Dar es Salaam (Tanganyika) and Makerere University College (Uganda) to establish the University of East Africa. Enrollment at the three African university colleges for 1960–61 to 1967–68 is shown in table 6.

The College Council.—In January 1967 "government control and administration" of University College, Nairobi was vested in a College Council. The Council's chairman was appointed by the University of East Africa Visitor, who happened to be the President of the Republic of Kenya. The principal of University College, Nairobi and certain other of its administrative officers served as ex-officio members of the Council. To this Council the East African Institute of Engineers, the Gandhi Memorial Academy Society, the Inter-University Council for Higher Education (located in Great Britain), and the Kenya Chamber of Commerce each appointed a member.[35]

The Council's powers were broad, embracing specific responsibility for finance and for the staff's term of service. On academic matters (entrance requirements, courses, degrees, and other awards) the Council had to consult with the Academic Board, comprised mainly of department heads. Chairman of this Board, however, was the College Principal, who thus spoke for the academic staff when the Board presented matters to the Council.

The College Organization.—University College, Nairobi, was organized into faculties, which were subdivided into departments. Each faculty's administrative head was a dean, who usually headed one of his departments also.

(See chapter 5, p. 73, for the faculties' entrance and degree requirements.)

[34] Under the British and East African education systems the term "college" is not the same as under the American system. The first two systems take students after they finish the secondary school's form 4 and give them technician-level training; they take students after they finish form 6 and give them professional-level training. At the end of either training level students receive not a degree but a diploma.

[35] For the names of the College Council members see the annual College *Calendar.*

Table 6. Number of Kenya students at the three East African university colleges, by sex: 1960–61–1967–68

[..... indicates source gave no data]

Level and college	1960–61		1961–62		1962–63		1963–64		1964–65		1965–66		1966–67		1967–68
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Total of men and women [1]
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
SUMMARY															
Grand total ..	388	12	499	58	404	67	457	79	557	105	687	139	841	180	1,297
Dar es Salaam	...	...	4	...	12	1	19	1	54	4	79	4	122	11	131
Makerere	388	12	309	10	209	6	214	13	225	30	230	34	251	36	344
Nairobi	...	...	186	48	183	60	224	65	278	71	378	101	468	133	822
BREAKDOWN															
Undergraduate Degree															
Nonprofessional faculties: [2]															
Total	*112*	*7*	*131*	*11*	*141*	*17*	*152*	*27*	*214*	*47*	*289*	*80*	*388*	*118*	*696*
Dar es Salaam	...	...	...	...	...	...	...	...	22	1	34	1	61	7	62
Makerere	112	7	118	8	110	6	95	8	96	17	76	20	78	25	134
Nairobi	...	...	13	3	31	11	57	19	96	29	179	59	249	86	500
Professional faculties: [3]															
Total	*61*	*2*	*87*	*1*	*130*	*1*	*180*	*3*	*223*	*4*	*294*	*8*	*351*	*8*	*429*
Dar es Salaam	...	...	4	...	12	1	19	1	32	3	41	3	54	4	59
Makerere	61	2	68	1	75	...	81	2	95	4	116	5	144	4	163

Nairobi	...	...	15	...	43	...	80	...	96	...	137	...	153	...	207
Postgraduate Degree															
Total	...	...	...	...	...	...	*13*	*1*	*37*	*6*	*47*	*10*	*48*	*6*	*56*
Dar es Salaam	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Makerere	...	...	...	...	...	...	10	1	12	4	16	6	8	2	11
Nairobi	...	...	...	...	...	...	3	...	25	2	[5]31	[5]4	40	4	44
Nondegree [4]															
Total	*215*	*3*	*281*	*46*	*133*	*49*	*112*	*48*	*83*	*45*	*47*	*41*	*54*	*48*	*116*
Dar es Salaam	...	...	...	...	...	...	...	...	...	...	4	...	7	...	9
Makerere	215	3	123	1	24	...	28	2	22	5	12	3	21	5	36
Nairobi [6]	...	...	*158*	*45*	*109*	*49*	*84*	46	61	40	31	38	26	43	71

[1] Source gave no breakdown by men and women. [2] These are the faculties of arts, education, and science.
[3] These are the faculties of agriculture, engineering, law, medicine, and veterinary science.
[4] In subjects such as domestic science and surveying.
[5] The breakdown by sex is an estimate.
[6] Royal College, Nairobi (later University College) did not attain university status until 1961. As Royal College, it had 201 students in 1960–61.
SOURCE OF DATA: Kenya. Ministry of Education. *Annual Report* 1967. Nairobi: Government Printer, 1968. p. 76.

University of East Africa

As a joint endeavor of three separate countries, the new University of East Africa began to grant its own degrees, abandoning the practice followed previously by the separate institutions in relying on the University of London's "external" degrees. It did, however, maintain close links with several overseas universities as a means for recruiting staff.

The 1963 University Development Plan.—In October 1963, the University of East Africa and the Governments of Kenya, Tanganyika, and Uganda participated in a conference held at Lake Como in Italy and sponsored by the major private and governmental aid agencies in Great Britain and the United States that were engaged in giving financial aid to education in these three countries.

Based on projections for available funds and staff, the 3-year Development Plan drawn up by the Como conference tried to minimize the problem of wasteful duplication of expensive facilities as recommended by the Tananarive Conference sponsored by UNESCO in 1962.[36] Although the Plan called for each of the three colleges to have its own faculties of arts, science, social science or commerce, and (when feasible) education, it also called for the colleges to limit unnecessary duplication of professional faculties, so that the following would be confined to one of the three institutions, as named:

Agriculture and medicine	Makerere University College
Architecture, engineering, and veterinary science	University College, Nairobi
Law	University College of Dar es Salaam

The 1967 University Development Plan.—In July 1967, signs began to appear that the 1963 University Development Plan was in jeopardy—that centrifugal forces would cause the University of East Africa to break up into three national universities. For example, University College, Nairobi launched its own medical faculty that month.

In October 1967 the same groups who had been present at the Como conference 4 years earlier met in Nairobi. Again the participants—among them, of course, the aid doners—tried to work out a 3-year development plan.

University Governance.—The University's governing body was the University Council, with membership composed of a chairman and a vice-chairman, both appointed by the University's chancellor; representatives from each of the three East African Governments; and represent-

[36] *Report of a Conference on the University of East Africa* (held at Villa Serbelloni, Bellagio, Italy, on October 21–25, 1963). (unpublished)
See also *Development of Higher Education in Africa.* Paris: UNESCO, 1963.

atives from the East African Common Services Authority. Academic matters reached the Council by way of the University Senate, whose chairman was the University's vice-chancellor (who acted as the University's academic and administrative head).

Disbanding of the University.—In July 1970, the University of East Africa formally disbanded. The fact that it survived for 6 years as a multinational institution during a period of extreme nationalism is, however, remarkable. The University's three components became the University of Nairobi, the University Dar es Salaam, and Makerere University, Kampala.

University of Nairobi

As a separate entity, the new University of Nairobi is expected (under the 1970–74 Development Plan) to achieve an undergraduate enrollment of 3,433 in 1973–74. The most rapid growth is projected for the Faculty of Medicine—from 69 to 488 during the same period. The University will establish new Faculties of Agriculture, Journalism, and Law.[37] Dr. Joseph J. Karanja, Kenya's former Higher Commissioner in London, who earned a Ph.D. from Princeton University, was inaugurated as the University's first Principal.

National Manpower Planning

Background.—Opportunity for higher education in Kenya has been severely restricted. Partly for this reason young Kenyans have looked for such an opportunity abroad, and in fact many hundreds found their way there during the early 1960's as politicians sponsored student airlifts.

After Independence, when the Government inaugurated crash programs to Africanize the public service, it became increasingly concerned as to how it could most efficiently draw on the high-level manpower potential inherent in Kenyan university students at home and abroad. In 1964, the Government's first manpower survey estimated that the number of such students abroad was four times greater than the number at home in East Africa.[38] The Government had little knowledge, however, of the location, the courses of study, or the career plans of the students who had gone abroad during those early years of the 1960's, since they had left Kenya for educational purposes without official Government approval. It was a strange situation: The Government had far better es-

[37] Kenya. Ministry of Economic Planning and Development. *Development Plan 1970–74*. op. cit. p. 474.

[38] Kenya. Ministry of Economic Planning and Development. *High Level Manpower: Requirements and Resources in Kenya 1964–1970*. Nairobi: Government Printer. 1965. (Frequently called the Davis Survey after its principal author.)

timates of its manpower needs than of its manpower supply. To remedy this situation it therefore developed a comprehensive program for linking all higher education for Kenyans, whether at home or abroad, with a national manpower planning program.

The 1964–1970 Planning Program.—To match the country's requirements and resources for high-level manpower the Program called for the Ministry of Economic Planning and Development to cooperate with other Ministries in—

1. Continuously assessing the priorities for high-level manpower of the public and the private sector.
2. Working out effective machinery to direct scarce resources for that manpower into the priority fields.

When the cooperating Ministries set broad targets for any given period in any given priority fields,[39] the Ministry of Education would then try to negotiate for a sufficient number of student places at the University of East Africa in the educational disciplines serving those fields. The Ministry also attempted to obtain foreign government scholarships for the same purpose.

Students who studied at the University of East Africa or abroad under foreign government scholarships were expected to pursue courses in the priority fields. Those going abroad under private auspices, however, could pursue any courses they wished; but they first had to inform the Ministry of Education concerning their intended absence from Kenya before they could obtain a passport.

The measures which the Government took to control the outflow of students from the country stopped East African and foreign politicians from making their own student-exit arrangments without Government sanction or knowledge. One result of that control is an improved statistical record of Kenya's potential high-level manpower.

The 1969–1974 Manpower Plan.—In 1969 the Ministry of Economic Planning and Development published a new manpower survey which showed that despite dramatic gains in "Kenyanizing" the public service, the proportion of citizens in top-level positions was still far from satisfactory. For example, 613 of Kenya's 762 doctors were noncitizens.

When estimating the supply and demand of various categories of high-level manpower, the Government identified critical bottlenecks to be met by foreign scholarships and by the planned development of the national educational system. The 1970–74 Development Plan noted these bottlenecks, but also drew attention to the impending surplus of

[39] For example, 50 percent of the students in the Faculty of Arts to teaching, and 20 percent of those in the Faculty of Science to agriculture.

manpower in certain occupations. Besides the widely recognized problem of unemployment among primary school "leavers," the Plan also noted that secondary graduates would soon have trouble finding jobs and that even the supply of qualified secondary teachers would exceed the demand for them in aided and maintained schools.[40]

Students Abroad

The Ministry's Higher Education Section.—Control of the number of students officially authorized to study outside Kenya has required an increase in the size and responsibilities of the Higher Education section in the Ministry of Education. The Ministry has assigned Education Attachés to the Kenya missions in Bonn, London, Moscow, and New York with the task of locating and assisting Kenya students within their jurisdictions. Assistance has ranged from legal help concerning immigration regulations to career counseling and recruitment for the rapidly changing job market at home. In 1965 the Higher Education section established a central registry of postsecondary students to integrate the records on all of them at home and abroad. As these records become more and more detailed and sophisticated they will provide a valuable tool for educational and manpower planners and for public and private employers.

Distribution of Students Abroad.—The 2,852 Kenya students estimated to be abroad during 1967–68 were scattered throughout 17 broad fields as shown in table 7. Among these fields, five attracted the greatest number of Kenyans:

Number	*Field*	*Number*	*Field*
613	Arts and social science	205	Fine arts, drama, and the like
495	Engineering	191	Agriculture
215	Science		

Since the breakdown, like the total, was only an estimate, the Kenya Government had no exact knowledge of the courses which specific students were pursuing, the level and quality of these courses, and the progress which the students were making.

In 1968–69 the estimated number of Kenya students abroad increased to 3,604, as shown in table 8. Of this number, 2,459 attended institutions in the United Kingdom, the United Soviet Socialist Republics, and the United States. The next three countries having the greatest number were India with 324, Bulgaria with 118, and Canada with 74.

[40] Kenya. Ministry of Economic Planning and Development. *1969–1974 Development Plan for Middle and High Level Manpower.* Nairobi: Government Printer, 1969.

Table 7. Number of students at the University of East Africa and estimated number at colleges and universities abroad, by field of study: 1967–68
[. . . indicates that source gave no figures]

Field of study	Total	University of East Africa				Abroad
		Total	Dar es Salaam	Makerere	Nairobi	
Total	**4,149**	**1,297**	**131**	**344**	**822**	**2,852**
Administration (business and public)	78	...	...	...	...	78
Agriculture	237	46	...	46	...	191
Architecture	39	27	...	...	27	12
Arts and social science	934	371	55	35	281	613
Commerce (accounts and finance)	182	87	...	...	87	95
Divinity	18	...	...	...	...	18
Education (administration, domestic science, teacher training, technical, etc.)	241	125	...	72	53	116
Engineering (civil, electrical, mechanical)	613	118	...	...	118	495
Fine art, drama, etc.	249	44	10	7	27	205
Fishery	2	...	...	...	...	2
Forestry	25	...	...	...	...	25
Land design, development, survey, etc.	28	28			28	...
Law	201	59	59	...	...	142
Library science	9	6	...	6	...	3
Medicine (health, nursing, pharmacy, surgery, etc.)	649	136	...	117	19	513
Science (biology, botany, chemistry, mathematics, physics, etc.)	401	186	7	32	147	215
Social work	23	23	...	23	...	...
Veterinary science	59	41	...	...	41	18
Vocational training	111	...	...	...	...	111

SOURCE OF DATA: Kenya. Ministry of Education. *Annual Report* 1967. Nairobi: Government Printer, 1968. p. 59.

Kenya would like to scale down the number of students going abroad. To this end it has shifted its emphasis in higher education to developing local institutions. Despite the Government's shift, however, the number of overseas students has remained high, partly because many prolong their foreign studies beyond the date originally estimated for these studies to be completed.

Table 8. Estimated number of students from Kenya attending colleges and universities abroad, by country: 1968–69

Country	Number of students	Country	Number of students
Total	**3,604**	Malagasy	13
Algeria	9	Netherlands	5
Australia	22	New Zealand	17
Bulgaria	118	Nigeria	5
Canada	74	Pakistan	46
Czechoslovakia	69	Poland	11
Denmark	11	Romania	21
Ethiopia	20	Spain	32
France	27	Sweden	25
Hungary	33	Switzerland	10
Ghana	34	United Arab Republics	28
Greece	13	United Kingdom	[1] 1,525
India	[1] 324	United Soviet Socialist Republics	444
Israel	23	United States	690
Italy	14	West Germany	45
Lebanon	32	Yugoslavia	64

[1] Includes a large number of students in high schools.

SOURCE OF DATA: Kenya. Ministry of Education. *Annual Report* 1968. Nairobi: Government Printer, 1969. p. 22.

Use of University-Trained Manpower

In 1967 the Ministry of Economic Planning and Development estimated high-level manpower requirements in selected occupations as 10,218 and the supply as 6,603. On that basis, the deficiency was 3,615. Table 9 shows the university-level manpower estimates for 1966–67 to 1974–75. If the assumption is valid that a large number of the general arts and science graduates will have to become teachers or general civil service administrators outside the school system, and that the number of openings in these positions will be fewer than the number of aspirants for the openings, then a surplus of such graduates will ensue. Whether or not it does ensue, projections in general do point to potential dislocations in the Kenya labor market. Many students returning from abroad may already have had to accept jobs less desirable than those to which they believed their training entitled them.

Table 9. Preliminary estimates of university-level manpower requirements, supply and deficiency (or surplus): 1966–67—1974–75

[. . . indicates source gave no figures]

Occupation [1]	Requirements			Supply			
	Total	Accelerated Economic Kenyanization		Total	University of East Africa	Expected from overseas	Deficiency (−) or surplus (+)
SUMMARY							
Grand Total	**10,218**	**6,593**	**3,625**	**6,603**	**3,859**	**2,726**	**−3,615**
Arts-based	4,127	2,616	1,511	3,116	1,611	1,505	−1,011
Science-based	6,091	3,977	2,114	3,487	2,248	1,221	−2,604
ARTS-BASED							
Administrative							
Total	*1,549*	*1,150*	*599*	*(2)*	*(1)*	*(2)*	[3] *1,549*
Nonadministrative							
Total	*2,578*	*1,466*	*1,112*	*3,116*	*1,611*	*1,505*	*+538*
Accountant	599	450	149	93	....	93	−506
Entrepreneur and administrator	....	....	....	418	297	121	+418
Lawyer	649	375	274	379	180	199	−270
Other	[4] 1,330	[5] 641	[6] 689	2,226	1,134	1,092	+896
SCIENCE-BASED							
Administrative							
Total	*1,060*	*800*	*260*	....	....	....	*−1,060*
Nonadministrative							
Total	*5,031*	*3,177*	*1,854*	*3,487*	*2,248*	*1,221*	*−1,544*
Agriculturist	476	412	64	459	258	201	−17
Architect and planner	247	172	75	202	169	33	−45
Dentist	98	75	23	8	0	8	−90
Doctor	1,255	750	505	457	431	26	−798
Engineer	1,700	1,200	500	933	395	520	−767
Pharmacist	183	97	86	41	0	41	−142
Veterinarian	200	150	50	174	123	51	−26
Other	[7] 872	[8] 321	[9] 551	1,213	872	341	+341

[1] Since the following occupations normally do not require university-level education in Kenya, they are excluded from the table: Fields unknown, lands and surveying, medicine and health (ancillary, dietetics, midwifery and nursing, and unspecified), social work, technicians (diploma-level), and vocational training.

[2] For this period the administrative figure was merged with that for entrepreneur and administrator (see nonadministrative group of figures below).

[3] Does not reflect the supply of administrators, which was included under "entrepreneur and administrator."

[4] Includes 835 arts teachers. [5] Includes 255 arts teachers. [6] Includes 580 arts teachers.

The Bonding Contract

In order to achieve its goal of Africanizing the public service as quickly as possible the Kenya Government has adopted the practice of bonding all higher education students supported by public funds. Under the bonding contract, such a student is required to serve in the public interest (as determined by the Director of Personnel)[41] for at least 3 years after completing his studies or else to repay the amount of the Government's investment in him. On its side, however, the Government does not obligate itself to employ every bonded student.

Kenyanization of the Private Sector

As Africanization of the general administrative jobs in the Civil Service proceeds, fewer such jobs are available for an increasing number of qualified persons. In view of mounting political pressure, the Governments issued in April 1967 a statement on Kenyanization of the Private Sector, stressing a policy that employers should give job priority to Kenyan citizens.[42] Later in 1967 the Ministry of Labor established a Bureau for Kenyanization of Personnel which had the task of coordinating hiring efforts with the supply of secondary and higher education graduates.[43] This Bureau must match the aspirations of job seekers with the needs of employers to the end that Kenya's scarce manpower may be used to the country's best advantage.

The Kenyanization program was strengthened by the December 1967 Immigration Act restricting work permits to citizens only. As a result, many Asians who had failed to take out Kenya citizenship left the country.

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[7] Includes 668 science teachers. [8] Includes 204 science teachers. [9] Includes 464 science teachers.

SOURCE OF DATA: *Report of the Conference on the University of East Africa.* Kampala: Uganda Press Trust, Ltd., 1967. pp. 61 and 62.

[41] With responsibilities for all personnel matters throughout the Government, the Directorate of Personnel is established in the immediate office of Kenya's President.

[42] Kenya. *Kenyanization in the Private Sector.* Nairobi: Government Printer, 1967.

[43] See *Report of the Careers Conference 1968, March 28–30, 1968* published for the Kenya Heads Association. Nairobi: National Christian Council of Kenya, 1968. (mimeograph)

Finance and Aid

Rising Costs

Since Kenya's Independence in 1963, the capital and recurrent costs of its educational system have risen steeply. Between 1964–65 and 1967–68, the Ministry of Education's budget doubled, with the greatest increases in secondary and higher education. Tables 10 and 11 show the Ministry's capital and recurrent expenditures, respectively,[1] for that period.

Table 10. Capital expenditures of the Ministry of Education: 1964–65–1968–69
[. . . indicates source gave no data]

Educational level	1964–65	1965–66	1966–67	1967–68	1968–69 (est.)
Total	**$1,269,783**	**$2,240,495**	**$1,956,920**	**$5,280,752**	**$8,283,682**
Primary	42,395	14,000	.....	.....	.....
Secondary	947,220	1,616,728	287,535	995,055	1,024,262
Teacher	41,392	321,776	508,348	171,814	[1] 117,628
Trade and technical	210,776	280,652	272,846	183,840	238,000
Higher [2]	28,000	.....	411,107	734,334	1,836,856
IDA project [3]	.....	7,339	477,084	3,195,710	5,033,336
Special [4]	.....	.....	.....	.....	28,000

[1] Including $28 spent for Kenyatta College.
[2] The Ministry also expended $5,600 in 1966–67 for Kenyatta College.
[3] A secondary-level project financed by an International Development Association loan under the International Bank for Reconstruction and development.
[4] Miscellaneous items at various educational levels.
SOURCE OF DATA: Kenya. Ministry of Education. *Annual Report* 1967 and *Annual Report* 1968. Nairobi: Government Printer, 1968 and 1969, respectively. pp. 86 and 83, respectively.

Although the precise educational/training component of Ministries other than Education is difficult to determine, it is clear that Kenya's educational effort—as measured by its share of the country's total budget—is growing. That share includes not only the Ministry of Educa-

[1] Kenya. Ministry of Education. *Annual Report 1968*. Nairobi: Government Printer, 1969. p. 86.

Table 11. Recurrent expenditures of the Ministry of Education: 1964–65–1968–69

Category	1964–65	1965–66	1966–67	1967–68	1968–69 (est.)
Total	**$11,059,300**	**$13,594,781**	**$16,219,458**	**$18,757,011**	**$21,878,360**
Administration [1]	537,634	886,035	804,381	977,855	1,072,652
Educational level:					
Primary [1]	747,835	204,406	164,203	118,129	81,228
Secondary [1]	3,907,229	5,896,122	7,694,274	9,448,270	10,587,640
Teacher	2,153,413	2,334,472	2,573,950	2,979,312	3,148,432
Trade and technical [1]	1,206,080	1,424,690	1,468,555	1,457,235	1,708,924
Higher	1,894,757	2,082,629	2,550,237	2,852,144	3,946,600
Other	612,352	766,427	963,858	924,076	1,332,884

[1] Parts of the expenditures were controlled by regional authorities for much of 1963–64 and half of 1964–65. The Ministry then assumed financial responsibility for all categories except primary education, for which, however, it retained a few minor financial responsibilities.

SOURCE OF DATA: Kenya. Ministry of Education. *Annual Report* 1967 and *Annual Report* 1968. Nairobi: Government Printer, 1968 and 1969, respectively. pp. 86 and 83, respectively.

tion's expenditures and those of other Ministries for education and training programs, but also grants from the Ministry of Local Government to local authorities. These three sources taken together provided education with the following percents of the country's total budget in the years indicated: [2]

Year	*Capital expenditures*	*Recurrent expenditures*
1964–65	3.9	9.6
1967–68 (estimate)	16.3	13.8

Government-Aided Schools

Schools receiving Government aid fall into two categories: maintained and assisted. The former receive Government financial aid to make up the difference between their revenues (mainly from fees) and their expenditures as approved on the basis of size, number and kind of courses, and other criteria. Assisted schools receive a fixed percentage of their expenditures as approved on the same basis, and the amount is usually from 60 to 90 percent for primary schools and 80 percent for secondary schools.[3]

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[2] Conference on the University of East Africa, Nairobi, October 22–26, 1967. *Background Information*, p. 48. (unpublished)

[3] Kenya. Ministry of Education. *Annual Report 1967*. Nairobi: Government Printer, 1968. p. 32.

Primary Education

Funds for primary education come mainly from two sources: school fees and grants from the Ministry of Local Government. Set by local authorities, school fees are uniform for each district (i.e., national political subdivision) and average $8.50 per year. Until recently the local authorities contributed to primary education through the Graduated Personal Tax, but collection was so difficult and yielded such disappointing results[4] that the Government abolished the tax entirely as part of its program to relieve the burden on the poor.

Education accounts for over 60 percent of County Council expenditures and is the largest single item in municipal budgets.[5]

The percentage of County Council expenditures going to primary education has varied in recent years from roughly 38 percent for Garissa County (North-Eastern Province) to 88 percent for Kakamega County (Western Province), with an average of 62 percent. During times of economic distress, budget cutbacks frequently fall on school equipment and teachers' salaries. In such times many County Councils lay off trained teachers, preferring to hire untrained ones at much lower salaries. Thus, the insecurity of the teaching staff, as well as its diluted quality, led to the establishment of the Teachers Service Commission, (chapter 3, p. 23).

Secondary Education

By far the greatest proportion of the Ministry of Education's budget is allocated to secondary education. The Government makes such an allocation despite the fact that the non-Government aided Harambee schools form an increasing proportion of all secondary schools and despite the further fact that foreign money aid and technical assistance have contributed much to secondary school expansion.

Secondary schools are financed through grants-in-aid, fees (paid directly to the Boards of Governors for individual schools and hence not appearing in Ministry of Education accounts), teachers assigned by the Teachers Service Commission, and teachers (mostly non-Kenyans) assigned by the Ministry of Education.

At day schools yearly fees average $28; at boarding schools, $40 for

[4] Jon Moris. *The Education and Training of the Farmer.* A paper prepared for the Kericho Conference on Education, Employment, and Rural Development at University College, Nairobi, in September 1966. p. D-1. (unpublished)

[5] Nizar Jetha. "The Budgetary Constraints in Kenya." *Education, Employment, and Rural Development.* James R. Sheffield, ed. Nairobi: East African Publishing House, 1967. p. 458.

girls and $67 for boys; and at "high-cost" (former Asian and European) schools, up to $700. Reflecting their lack of Government aid, Harambee schools charge between $90 and $175 per year. To help reduce the number of dropouts from forms 5 and 6 of the public schools the Government in January 1966 abolished fees at those levels.

Higher Education

Capital Expenditures

The 1967 Conference on the University of East Africa concerned itself with the matter of capital assistance for the University during 1967–70.[6] According to its Vice-Chancellor, Sir James Cook, donor agencies would not be asked to pledge support for any specific portions of the University Development Plan. Nevertheless, the former Permanent Secretary in Britain's Ministry of Overseas Development, Sir Andrew Cohen, remarked as follows: [7]

> This is not the moment to mention precise sums of money, and indeed it would be premature to do so. But I certainly hope that the capital assistance which we shall be able to give for the triennium toward higher education will exceed £1 million as it did in the last triennium.

During 1964–67, most of the University's capital expenditures were covered by foreign aid and 90 percent of its recurrent expenditures by public funds from within East Africa. Foreign aid must be characterized as absolutely vital to the University's development. The sources of foreign aid for the 1964–65 to 1966–67 period are shown in table 12.

Recurrent Expenditures

University of East Africa.—The contributions of each East African country to the University of East Africa during the 6 years of its existence stemmed from certain recommendations of the University Grants Committee. That Committee was composed of representatives from each country's Ministry of Education, the East African Community, and the academic community in Great Britain and the United States. The Committee based its recommendations on somewhat shaky assumptions as to projected enrollments and staffing patterns and estimated revenues and expenditures. It nevertheless recommended the following allocations (in thousands of dollars) to the University's three component institutions: [8]

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[6] *Report of the Conference on the University of East Africa, Nairobi, Kenya, October 23–26, 1967.* Kampala: Uganda Press Trust Ltd., 1967. pp. 111–13.

[7] Ibid. p. 112.

[8] University of East Africa. *Report of the University Grants Committee 1967.* Kampala: Uganda Press Trust Ltd., 1967. p. 17.

Table 12. Amounts given by governments and private organizations outside East Africa to University College, Nairobi and other components of the University of East Africa for development and research: 1964–65–1966–67
[Amounts in thousand dollars. · · · indicates source gave no figures]

Donor	University College Nairobi	Other components
Total	**$6,359**	**$16,428**
Canada	315	220
Carnegie Corporation	373	...
Denmark	320	...
Dulverton Trust [1]	90	...
The Ford Foundation	...	551
Netherlands	...	1,005
The Rockefeller Foundation	291	...
Sweden	...	8,400
United Kingdom—ODM [2]	1,152	1,428
United Nations Development Program		
FAO [3]	...	1,141
IAEA [4]	8	...
ILO [5]	...	765
UNESCO [6]	2,302	1,445
UNTA [7]	...	66
United States—AID [8]	1,293	1,407
West Germany	215	...

[1] Located in London.
[2] Overseas Development Ministry
[3] Food and Agricultural Organization.
[4] International Atomic Energy Agency.
[5] International Labour Organisation.
[6] United Nations Education, Scientific, and Cultural Organization.
[7] United Nations Technical Assistance Agency.
[8] Agency for International Development.
SOURCE OF DATA: World Bank. Consultative Group for East Africa. *Working Paper.* March 1968. (unpublished)

Institution	*Total*	*1967–68*	*1968–69*	*1969–70*
Total	*$31,774.4*	*$9,794.4*	*$10,701.6*	*$11,278.4*
Dar es Salaam	7,014.0	2,044.8	2,368.8	2,500.4
Makerere	12,737.2	3,956.4	4,286.8	4,494.0
Nairobi	12,023.2	3,693.2	4,046.0	4,284.0

University College, Nairobi.—Almost in rebuttal to its enrollment and expenditure assumptions, the Committee expected per-student costs (costs in actual dollars) at University College, Nairobi to decline during the same 3 years as enrollments rose:

Item	*1967–68*	*1968–69*	*1969–70*
Enrollment	1,539	1,928	2,296
Per-student costs	$2,399	$2,100	$1,864

The costs covered tuition (nearly $850 per year), but not residential fees (more than $500, which the Government was paying), books, and the student's out-of-pocket expenses.

Kenya spends over $3 million per year for higher education's recurrent expenses.[9] When one realizes that the total cost of educating each student at University College, Nairobi for one year was roughly 30 times Kenya's per capita income, the pressures to economize on higher education take on a sense of urgency.[10]

In 1966–67 the Kenya students abroad outnumbered those in East Africa three times. Support for the overseas students during any year shows the following sources, by percentage: [11]

Percent	*Source*
60	Private
30	Foreign scholarships available through the Kenya Government
10	Local County Council or the Kenya Government's Overseas "Bursaries"

As part of its manpower planning, the Government allocates loans and scholarships to science and arts students, both within East Africa and overseas, on the following percentage basis:[12]

Science curriculum		*Arts curriculum*	
Percent	*Field*	*Percent*	*Field*
30	Teaching	50	Teaching
25	Agriculture	50	Other fields
25	Engineering		
20	Medicine		

Naturally, it is not always possible to make allocations strictly according to the formula, which may be modified according to the number of available places, the number of students graduating from secondary schools, and other considerations. Some such formula, however, is necessary and setting one up is an effort to develop those fields in which high-level manpower is in short supply.

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[9] Kenya. *Estimates of Recurrent Expenditures 1968–69.* Nairobi: Government Printer, 1967. p. 84.

[10] See "White Washing the Towers," by Nicholas Bennett in *Transition,* 7:37:36, for a critique of the high costs of university education in East Africa.

[11] Kenya. Ministry of Education. *Triennial Survey 1964–66 and Annual Report 1966.* Nairobi: Government Printer, 1967. pp. 33 and 34.

[12] Kenya. Ministry of Education. *Triennial Survey 1964–66 and Annual Report 1966.* op. cit. p. 34. (Percentages in the formula vary from year to year as priority needs change.)

The 1970–74 Development Plan announced a major policy shift from fully supported scholarships to loans, beginning in 1970–71.[13] The argument for loans favors both the student and the Government. If a student takes out a loan (which he must repay) because he cannot get a scholarship (which he is not required to repay) he still will not suffer undue hardship after graduation in repaying the loan. The kind of job into which his education will lead him will bring an income representing a return on his loan investment of at least 15 percent. As for the Government, shifting from student scholarships to student loans greatly reduces its costs for higher education and thereby frees funds for other kinds of development.[14]

Sessional Paper No. 10 on African Socialism advocates the theory that the fortunate members of a community (for example, the well-educated) should be expected to make a commitment of service to that community.[15] The Development Plan 1970–74 reflects this theory in calling for a shift in priorities toward rural development, with the rich to carry a heavier burden than before.[16]

Foreign Aid

In 1967, Tom Mboya, then Kenya's Minister of Economic Planning and Development, stated that much of the so-called "aid" from rich nations to poor nations was "falsely advertised." [17] According to conditions set down for this aid, not only is a large proportion earmarked for military purposes, but many of the "grants" are restricted to purchase from the donor country and the terms of the "loans" are hardening.

Nevertheless, the 1970–74 Kenya Development Plan states that one-half of the country's capital needs for those years will have to be financed by foreign loans and grant.[18] At least three-fifths of the estimated 1967–68 capital for education came from foreign sources, primar-

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[13] Kenya. Ministry of Economic Planning and Development. *Development Plan 1970–74*. Nairobi: Government Printer, 1970. p. 484.

[14] Daniel Rogers. *The Returns to Investment in Higher Levels of Education in Kenya* (Discussion Paper No. 59). Nairobi: University College, Nairobi—Institute for Development Studies, January 1968. (unpublished)

[15] Kenya. *African Socialism and Its Application to Planning in Kenya*. Nairobi: Government Printer, 1965.

[16] Kenya. Ministry of Economic Planning and Development. *Development Plan 1970–74*. op. cit. p. 484.

[17] Tom Mboya. *A Development Strategy for Africa: Problems and Proposals* (Speech at the opening session, February 13, 1967, of the Economic Commission for Africa in Lagos). Nairobi: Government Printer, 1967. pp. 7 and 8.

[18] Kenya. Ministry of Economic Planning and Development. *Development Plan 1970–74*. op. cit. p. 484. (In general, the assumption appears reasonable. See F. X. Sutton, "Aid and the Problems of Education, Employment, and Rural Development," in *Education, Employment, and Rural Development*. op. cit. p. 472.)

ily the International Development Association (I.D.A.) loan and the funds from the U.S. Aid for International Development (US/AID).[19]

In August 1966 the Government of Kenya signed a Development Credit Agreement with the International Development Association for a $7 million loan, which will expand secondary schools as a whole, as well as some technical schools and teacher-training colleges.

Foreign donors have borne practically all the development costs of University College, Nairobi.[20] Although the true value of bilateral aid is difficult to determine, the Kenya Ministry of Education has stated that Britain, Sweden, and the United States have been the "main sources" of such aid to the country's educational system.[21]

Britain financed much of the construction costs at University College, Nairobi and at the teacher-training college in Kisii (Nyanza Province) and in Shanzu (Coast Province). It also turned over to Kenya the Templan Army Barracks, which became Kenyatta College. As its largest single aid effort in any country, Sweden built and initially supported the Kenya Science Teachers College, located at Nairobi (see p. 34).

Throughout its developmental years Kenya has been receiving educational aid from Government agencies in the countries named above and also from international agencies and private foundations. Among the agencies are the International Atomic Energy Agency and the United Nations Technical Assistance Agency; among the foundations, the Carnegie Corporation and the Dulverton Trust as detailed in table 12.

Technical Assistance

For obvious reasons, aid donors are reluctant to become involved in paying recurrent expenses, whether for schools, business, or industry. Temporary skilled manpower is, however, an indirect form of subsidizing recurrent costs until the recipient country is able to staff and operate all its enterprises.[22] One of the ironies of Africa's post-Independence period is that although technical assistance from foreign sources may be temporary, it apparently will have to increase if the new na-

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[19] Kenya. *Development Estimates for the Year 1967–68*. Nairobi: Government Printer, 1967. pp. iv and v.

[20] Ibid. p. 44.

[21] Kenya. Ministry of Education. *Triennial Survey 1964–66 and Annual Report 1966*. op. cit. p. 15.

[22] See *Aid to Africa* by I.M.D. Little. London: Pergamon Press, 1964. Also see *Aid in Uganda: Education* by Peter Williams. London: Overseas Development Institute, 1966.

tions on the continent are to achieve rapid growth and eventual self-sufficiency.[23]

Britain is the largest contributor among nations to technical assistance for Kenya. More than 1,500 Britons were engaged in their country's technical assistance programs in Kenya during 1966.[24] Among that number were over 600 on educational projects sponsored by the Overseas Service Aid Scheme.[25]

Foreign Secondary School Teachers

The largest single category of technical assistance workers in Kenya is that of secondary school teachers. Among such teachers in March 1969 were 225 U.S. Peace Corps volunteers and many others from a dozen more countries besides the United States. Three years earlier in 1966, 65 percent of the secondary teachers were noncitizens as were 91 percent of all secondary teachers who had university degrees.[26]

Well aware of the disadvantages that result from leaving the education of the nation's future leaders largely in the hands of foreigners, the Ministry of Education is accelerating the production of Kenya teachers. The Government has decided, however, that the long-run advantages of dramatically expanding secondary school opportunities will outweigh the short-run disadvantages of depending on noncitizens as teachers.

Foreign Personnel in the Ministries

Besides UNESCO, UNICEF, and the Ford Foundation, more than six foreign governments have technical assistance personnel in Kenya's Ministry of Education. Their roles range from that of advisers and supervisors [27] to that of the Peace Corps volunteers who teach in secondary schools and at Kenya Polytechnic.

In 1968, 21.3 percent of the staff at primary teachers colleges were British, and 10.9 percent Americans.[28]

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[23] See *Education and Foreign Aid* by Karl N. Bigelow and Philip H. Coombs. Cambridge: Harvard University Press, 1965. Also see *Educational Development in Africa: The Role of United States Assistance* by John W. Masland. New York: Education and World Affairs, 1967.

[24] F. X. Sutton. "Aid and the Problems of Education, Employment and Rural Development" in *Education, Employment and Rural Development*, J[illegible] Sheffield, ed. op. cit. p. 472.

[25] Kenya. Ministry of Education. *Triennial Survey 1964–66 and [illegible] 1966.* op. cit. p. 15.

[26] Ibid. p. 80.

[27] For example, under a US/AID contract a team from the National [illegible] Association (U.S.A.) helped with the New Primary Approach program (chapter 5).

[28] Kenya Institute of Education. *New Directions in Teacher Education* (Proceedings of the Second Kenya Conference, 1968). Nairobi: East African Publishing House, 1969. p. 134.

In other Ministries besides Education and at former University College, Nairobi, technical assistance programs also provide a considerable number of education training staff. For example, the Ministry of Agriculture and Animal Husbandry has staff from US/AID to work with 4–K clubs, give advice on range management and irrigation, and teach at the college for agriculture, Egerton College.

Foreign Academic Staff in Higher Education

The Kenya Institute of Administration and University College, Nairobi have had a large proportion of noncitizens on their staffs—at the latter in 1967–68 approximately 75 percent.[29] Nevertheless, University College was making steady progress toward raising the proportion of Kenyans on its staff.

To attract Africans to the staffs of the institutions forming the University of East Africa, the Rockefeller Foundation financed the Special Lectureship Scheme. Under the Scheme, which grew out of the 1963 Como Conference, promising African scholars are appointed to supernumerary positions to enable them to finish their graduate study. During 1964–67, for example, approximately 60 percent of the East Africans on the University of East Africa academic staff were associated at one time or another with the Special Lectureship Scheme.[30]

US/AID and the British Ministry of Overseas Development have shown interest in furthering the idea of special lectureships for the period 1967–70.[31]

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[29] Aggrey S. Awori. "East African University Must Be Africanized." *East Africa Journal*. December 1967, p. 22.
[30] Ibid. pp. 16–18.
[31] *Report of the Conference on the University of East Africa, Nairobi, Kenya, October 23–26, 1967*. Kampala: Uganda Press Trust Ltd., 1967. pp. 111–13.

Curriculum and Examinations

European Origins

Criticisms

Nearly all observers of African education have critized the transplantation of European educational systems onto African soil. The critics usually point out that since the transplanted systems were poorly suited to conditions in Africa, they merely created misfits caught between the old world of their parents and the new, urban, industrial world of the 20th century.

In Kenya, criticism first achieved prominence as a result of the 1924 Phelps-Stokes Reports, which called attention to African educational deficiencies.[1] The Colonial Government's response to the Report, however, (ch. 2, p. 8) was inconsistent with later policy statements by the Colonial Office Advisory Committee. In line with those policy statements and as a result of demands by the European community within Kenya for a stable labor force, the Colonial Government established several technical schools. But the traditional academic curriculum, which prepared students for white-collar jobs, was satisfactory to the missionaries, who ran most of the African schools, and also to most parents. Until Independence, education remained separate for the major racial groups, and African parents viewed with suspicion any attempts to introduce agriculture or other practical vocational subjects.

All major policy statements on education since the Phelps-Stokes Reports have characterized African education as too bookish and as enticing Africans away from their own usually rural society towards clerical jobs or other employment in urban society.[2] After Independence, the criticism generally fell into two broad categories: social/cultural/political and economic/vocational:

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[1] Thomas Jesse Jones. *Education in East Africa.* London: Edinburgh House Press, 1925.

[2] See *Policies and Progress in African Education in Kenya, 1949–63* (unpublished Ed. D. dissertation) by James R. Sheffield. New York: Teachers College, Columbia University, 1964.

1. *Social/cultural/political.*—The Africans' normal cohesive strength and integrity based on family and kinship ties have disintegrated because schools have been too European in orientation.
2. *Economic/vocational.*—The old bookish curriculum does not meet today's urgent demand for high-level manpower.

Solutions

In terms of these broad categories, possible solutions for the educational dilemma could be grouped as follows: [3]

1. *Social/cultural/political.*—Schools must seek out and preserve the best elements in traditional cultures such as art, history, languages, and music. Schools should develop the "African personality" ("négritude," as it is called in French-speaking Africa). Through political socialization, schools should contribute to national unity.
2. *Economic/vocational.*—In order for the country to achieve rapid economic growth, schools must concentrate on producing skilled workers for occupations in which the labor supply is low—engineers and scientists, for example. Also, since the work of over 80 percent of the population is agriculture, schools must somehow prepare students to lead productive lives in rural areas.

Centralized Control

Education in Kenya is highly centralized. First, there is legal and financial control. Then, school inspection and a national system of examinations combine to control the quality and organization of teachers and the content of the syllabus. In 1968 the Inspectorate consisted of 25 professionals, 14 of them special subject inspectors and seven provincial inspectors. The other four specialized in primary, technical, and teacher education. The Inspectorate also helps new schools attain Ministry-set standards and it draws up surveys and plans for new buildings, equipment, textbooks, and other things.[4]

It is admittedly irrelevant as to whether examinations determine the

[3] See *Education, Employment, and Rural Development,* James R. Sheffield, ed. Nairobi: East African Publishing House, 1967. Also see *The Africanization of the Curriculum in Kenya* (Comparative Education Dissertation Series No. 12), by George Urch. Ann Arbor: University of Michigan, 1968.

[4] Kenya. Ministry of Education. *Annual Report 1968* and *Triennial Survey 1964–66 and Annual Report 1966.* Nairobi: Government Printer, 1969 and 1967, respectively. p. 14 and pp. 25 and 26, respectively.
See also *Primary School Inspection in New Countries* by W. A. Dodd. London: Oxford University Press, 1968.

syllabus or the syllabus determines the examinations; the two form inseparable parts of a whole. To some outsiders the system seems a straight jacket, but until a better alternative appears, competitive naional examinations will inevitably continue. The significant fact is not the serious deficiencies of the inherited curriculum and examinations system but the Government's rapid strides toward improving them.

Primary Education

In 1967 the Ministry of Education published the first unified syllabus for all primary schools.[5] This spells out in great detail the subjects to be taught, the books to be used, and the amount of time to be allocated for each activity. Yet the syllabus does assure flexibility and leeway to innovate:

> Certain schemes of work are being prepared centrally by the Ministry of Education, but schools are under no obligation to use these schemes providing they have a suitable alternative, nor is there objection to these schemes being modified.[6]

In defining the main purpose of primary education, the syllabus says that—

> . . . preparation for the Kenya Preliminary Examination is subsidiary to the main purpose of primary education, which is to help children develop according to their needs and abilities and to prepare them for their future life and for work in secondary schools.[7]

The New Primary Approach

One of the most successful features in Kenya's primary education, the New Primary Approach (N.P.A.) is essentially a shift from passive rote learning to active, child-centered learning. First developed in the late 1950's as a method for introducing Asian children in standard (grade) I to English as the medium of instruction, N.P.A. spread widely throughout standard I classes. In 1966 half of them were using N.P.A.[8]

The 1965 Survey.—In February and March 1965, the Ministry of Education requested a major survey of N.P.A. When completed, this survey recommended that—

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[5] Kenya. Ministry of Education. *Primary School Syllabus.* Nairobi: Government Printer, 1967.
[6] Ibid. p. i.
[7] Ibid. p. ii.
[8] Kenya. Ministry of Education. *Triennial Survey 1964–66 and Annual Report 1966.* op. cit. p. 5.

1. English become the universal language of instruction throughout the Kenyan educational system.
2. Swahili be introduced in Standard (grade) IV and continue as a compulsory subject except in urban areas where it is the vernacular.
3. Pupils become literate in their particular vernacular languages.

The survey report also recommended certain organizational changes necessary for preparing materials and training teachers.[9] In developing and expanding N.P.A., the Ministry of Education has followed the recommendations for the most part; but since new materials and intensive teacher training make this method more expensive than the old one, the Ministry has not been able to introduce it as quickly and as widely as it would like.

Normal Class Periods.—Standards I, II, and III normally have 35 to 40 periods per week of 30 minutes each; standards IV, V, VI, and VII, 45 periods of 35 to 40 minutes. The number of periods per week in primary school are shown in table 13, by subject and standard for 1967.

Table 13. Number of periods per week in primary school, by subject and standard: 1967

[. . . indicates source gave no data]

Subject	Standard			
	I	II	III	IV to VII
Total	**35**	**35**	**40**	**45**
Arts and crafts/needlework and domestic science	4	4	4	4
English	4	4	7	10
Geography	..	..	3	3
History and civics	..	..	2	3
Mathematics	6	6	7	8
Mother tongue (reading, writing, language work)	10	9	5	..
Music and singing	1	1	1	1
Physical education and games	5	5	4	3
Religious education	4	3	3	3
Science (including agriculture, gardening, and health education)	1	3	4	6
Swahili	..	..	..	[1]4

[1] One of the periods is optional.

SOURCE OF DATA: Kenya. *Primary School Syllabus 1967.* Nairobi: Government Printer, 1967. p. ii.

[9] Marnixius Hutasoit and Clifford H. Prator. *A Study of the New Primary Approach in the Schools of Kenya.* March 1965. (unpublished)

All classes are scheduled to coincide with school broadcasts from the Voice of Kenya radio station.[10]

Syllabus for Standards I, II, III.—Although English has become the medium of instruction, under N.P.A. the medium is less central than the active, informal classroom atmosphere in which "the emphasis is on learning rather than on teaching." That emphasis pervades the N.P.A. syllabus for standards I, II, and III, which covers activities (art, handwork, music, and nature study), physical education, reading, religious education, vernacular language, and writing; and it contains a description of subjects which are introduced in standard III.[11]

All parts of the syllabus contain progressive pedagogical instructions. For example—

> . . . centers of interest in this year [Primary I] should be based on the child's immediate surroundings at first, and then gradually extend outwards.[12]

and

> A young child learns from his environment. He is not concerned with subjects of study. Therefore it is suggested art, handwork, dramatic work, poetry, nature study, and music should all be treated as activities.[13]

The syllabus also gives numerous pointers on methodology and suggests specific books for both pupils and teachers.

Mathematics and Science Projects

In the summer of 1961 educators and scholars from Kenya and three other English-speaking countries in Tropical Africa (Ghana, Sierre Leone, and Uganda), together with American and British educators and scholars, held a 6-week conference in Dedham, Massachusetts. Their purpose was to determine whether the philosophy and methods of new American curriculum reforms might be relevant to the needs of developing countries. Two of the five subject matter areas for which the conferees made recommendations were mathematics and science.

The African Mathematics Program.—The following year, 1962, at Entebbe, Uganda, a mathematics workshop for African and American educators was conducted with assistance from the Education Development Center (based in Newton, Massachusetts). This workshop produced an experimental mathematics program (the "Entebbe Math") and later that year a center established in Nairobi began to prepare appropriate

[10] Kenya. Ministry of Education. *Primary School Syllabus.* op. cit. pp. ii and iii.
[11] Ibid. pp. 13–22.
[12] Ibid. p. 15.
[13] Ibid. p. 20.

teaching materials. In 1964 this center conducted inservice training for mathematics teachers. In 1965 some schools began to use the program; by 1967 both English-medium and vernacular schools were using it with great success. Like other subjects under the New Primary Approach, mathematics encourages pupils to learn through discovery—to think creatively with ideas and processes.[14]

The African Primary Science Program.—In 1965 at Kano in Nigeria, African, American, and British educators and Ministry officials conferred for one week on the possibility that the Education Development Center might provide curriculum-building help for science also. As a result, the African Primary Science Program came into existence with a particular mechanism for local development and adaptation of materials.[15]

The first experimental program was introduced into nine Kenya schools in January 1966 and by mid-1967 eight of the nine were still participating. Enthusiastically carried out by teachers and pupils, the program does require new materials, but enough inexpensive substitutes are forthcoming to take the place of normally expensive equipment (such as microscopes fashioned from flashlight bulbs or drops of water) so that teachers do not feel unduly hampered.[16]

Summer workshops have developed five categories of written materials: teachers' guide, teachers' background book, mini units (ideas to help the teachers carry on science activities with the class), pupils' books, and pupils' outside reading materials known as the Science Library Series.[17]

One teachers' guide, *Construction With Grass,* was developed under trial teaching and completed at the Nairobi Writing Workshop in April 1969 (appendix A).

In the Science Library Series, five booklets "tell about the stars in the African sky." Developed at the University of Nigeria, one of the booklets, *Using the Sky,* was finished at the Curriculum Development and Research Center in Nairobi (appendix A).

Non-N.P.A. Courses

English.—The New Oxford English Course (books 1–5) and a variety of other readers form the basis of the English language syllabus for the

[14] Ibid. p. 72.
[15] Education Development Center. *African Primary Science Program.* Newton, Mass. The Center, March 1970. pp. 1 and 2. (mimeograph)
[16] Gilbert P. Oluoch and William S. Warren. *Curriculum Development: A Case Study in Kenya.* (unpublished) Mr. Oluoch was Director, Curriculum Development and Research Center, Nairobi. Mr. Warren is a member of the Pilot Communities Group at the Education Development Center, Newton, Mass.
[17] Education Development Center. op. cit. p. 6.

primary school. It aims gradually to develop the pupils' command of English to the point where they will be ready for it as the medium of instruction in standard V. The syllabus recommends a long list of readers' and teachers' books. Although most of the recommended items are published in Great Britain, over half are related to African subjects and scenes.[18]

Mathematics.—The basic texts for non-N.P.A. mathematics are the Longman's *Highway Arithmetic* and *Highway Mathematics.* The official syllabus stresses the concept that—

> Mathematics, perhaps more than any other subject, depends on a logical sequence of ideas, and each new stage is built on those preceding it. It is therefore important that individual children, who for one reason or another, have gaps in their knowledge, should have opportunities of making up what they have missed.[19]

Religious Instruction.—In 1964, the Education Commission stated that "public schools are an instrument of a secular state." [20] Nevertheless, Kenya has retained religious instruction as part of the primary syllabus, which, however, spells out only Roman Catholic and Protestant programs. But since the Constitution guarantees freedom of religion, the Government policy is to allow other religious groups—primarily Hindu and Moslem—to submit their proposed syllabuses to the Chief Education Officer for approval. In an ecumenical appeal to its Christian constituency the 1967 syllabus remarked—

> It is hoped that discussions between Protestants and Roman Catholics on the content of a "unified" syllabus for Religious Education will take place in the near future.[21]

General Philosophy of the Primary Syllabus

To relate each subject to the pupils' immediate environment is the philosophy behind the treatment which that subject receives in the syllabus. The syllabus outline for geography and history presents a study of the region and it translates the title *Gulliver's Travels* as *Safari ya Gulliver.*[22]

The philosophy of the New Primary Approach has found its way into the entire Primary Syllabus. The general science course particularly shows that influence, for it stresses critical observation—learning for oneself. The syllabus is careful not to use gardening as an excuse for

[18] Kenya. *Primary School Syllabus:* op. cit. pp. 39–57.
[19] Ibid. p. 58.
[20] Kenya. *Education Commission Report: Part I.* Nairobi: The English Press, Ltd., 1964. p. 25.
[21] Ibid. p. 1.
[22] Ibid. p. 87.

agricultural training or manual labor (which would offend many parents). It is also careful to present regional animal and plant life as part of man's place in his total environment.[23]

The Kenya Preliminary Examination

Access to secondary school and to employment after primary school is determined entirely by the Kenya Preliminary Examination (K.P.E.). As in other countries where national competitive examinations separate the few who go on to further education after primary school from the many who do not, the K.P.E. haunts millions of parents and children. They discover that job qualifications are more stringent and the competition stronger as more children go to secondary school. Many parents interpret their children's K.P.E. failure as a sign that investment in primary school fees is wasted.

The New Certificate of Primary Education.— In 1966, as a national average, only 48.5 percent of the children taking the K.P.E. passed [24] and fewer than half of those passing found places in secondary schools. To eliminate this failure syndrome the Ministry of Education awarded all 1967 K.P.E. candidates the Certificate of Primary Education.[25] This certificate records the candidate's achievement on each of the three K.P.E. papers [26] as A, B, C, D, or E rather than merely pass or fail.[27] School officials hope that this record of accomplishment will help the child who leaves school at the end of the primary level to bear his psychological burden.

Content of the Examination.—Produced by the same section of the Ministry of Education, the Kenya Preliminary Examination and the Primary Syllabus are obviously compatible. The examination consists of three multiple-choice papers, each of which allows the pupil one-and-a-quarter hours for completion. The *General Paper* (appendix B) contains questions on geography, history, nature study, and science; the *English Paper* (appendix B), questions on paragraphs and word usage, and short exercises to test writing ability. The *Mathematics Paper* is typical of any primary mathematics test.

Recently, the Kenya school system has been assigning pupils to

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[23] Ibid. pp. 111–144.

[24] Kenya. Ministry of Education. *Triennial Survey 1964–66 and Annual Report 1966.* op. cit. p. 28.
The national 48.5-percent pass rate becomes significant when one realizes that the range was from 36.3 percent in North-Eastern Province to 58.6 percent in the city of Nairobi.

[25] This certificate had been recommended by the Ominde Commission.

[26] The word "paper" in this context means an examination section or portion devoted to a specific subject or course and calling for some form of written answers.

[27] Kenya. Ministry of Education. *Annual Report 1967.* Nairobi: Government Printer, 1968. p. 16.

secondary schools with the help of a computer which prints lists of the pupils according to their K.P.E. scores and their choice of schools.

Secondary Education

Curriculum and Syllabus

No published version of the secondary school curriculum and syllabus is available in Kenya, but Inspectorate-dispatched mimeograph instructions known as circular letters set forth the program's form and content. Distributed through the Provincial offices to all secondary schools and teacher-training colleges, these circular letters establish the guidelines by which schools prepare students for the next series of competitive examinations (appendixes C, D, E, and F).

General Policy.—The January 27, 1967 circular letter stated the Ministry's general policy on curriculum in these words:

> The curriculum in all Forms I to IV should be based on a wide range of subjects suitable for an all-round, non-specialized education and leading to a broadly based school examination. English and Mathematics should always form a part of this curriculum.[28]

The Daily Routine.—The same circular letter established the daily routine [29] as follows:

Periods

8:00– 8:15	Assembly
8:15–10:15	Three 40-minute periods
10:15–10:30	Break
10:30–12:30	Three 40-minute periods
12:30– 2:00	Lunch
2:00– 3:30	Two 40-minute periods
3:30– 4:30	Preparation (two half-hour periods) [30]
4:30– 4:45	Break
4:45– 6:00	Games, clubs [31]

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[28] Kenya. Ministry of Education. Circular Letter No. INS/c/1/8/85. January 27, 1967. *Secondary School Curriculum.* (unpublished)

[29] For the weekly allocation of periods to subjects as recommended in the same circular letter, see appendix G.

[30] According to the circular letter: "The Preparation period during the afternoon caters particularly for the needs of day pupils. For such pupils in senior classes a third period could be added during the lunch hour or after 4:30 if no other activities are arranged for a particular day. In boarding schools Preparation can normally be held during the evening."

[31] According to the circular letter: "Where Saturday morning school is possible, it can be used for extra-curricular activities and games; also an exchange with, for example, the Wednesday afternoon timetable can be made."

Subject Matter Circular Letters.—English Readers are the topic of one circular letter grading the Readers according to the difficulty of the English vocabulary which each Reader uses. Although it lists book titles according to the form in which students are expected to be when they read the particular books, it also emphasizes that the sequence for reading them is not intended to be rigid.[32]

Another circular letter deals with the History Syllabus for East Africa. Must of the material in that syllabus is pre-British—for example, tribal migrations and early kingdoms in Buganda.[33] Later circulars recommend history readings for students and teachers.[34]

Nonacademic Curriculum

In order to teach vocational agriculture, commercial or technical subjects or other subjects requiring special equipment or staff, a school must receive authority from the Ministry of Education. If it receives that authority, the school usually substitutes the new subject for a three-period-a-week science.

Vocational Agriculture.—Since Kenya is predominantly agricultural, introducing agriculture into selected schools is a significant step. In 1959, after lengthy discussions between Ministry officials and local persons, a pilot project was started at Chavakali Secondary School in Western Province. In 1962, the Cambridge (England) Examinations Syndicate approved the school's course. This course combined classroom and field work, and the December 1963 examination consisted of both a written paper and a field examination.[35]

The early success of the Chavakali pilot project stimulated the Ministry of Education to extend the vocational agriculture program ("Vo-Ag") to schools in each Province. Assisted by an AID contract with West Virginia University, the Ministry has provided equipment and staff. Teachers in this expanded program not only teach courses that lead to the East African Examination Certificate, but also organize youth clubs and extension programs.[36]

It is still too early to assess the impact of vocational agriculture

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[32] Kenya. Ministry of Education. Circular Letter No. INS/c/4/3/116. *Class and Library Readers in Forms 1–4.* (unpublished)

[33] Kenya. Ministry of Education. Circular Letter No. INS/D/6/5/Vol. II/10. October 6, 1966. *The Official New History Syllabus for Centers in East Africa.* (unpublished)
"Centers" are schools authorized by the University of Cambridge Overseas Certificate Syndicate to administer its examinations.

[34] Kenya. Ministry of Education. Circular Letter No. INS/D/6/5/Vol. II/107. April 6, 1967. (unpublished)

[35] Robert Maxwell. "Teaching Agriculture in Secondary Schools." *East Africa Journal.* June 1965. pp. 27 and 28.

[36] See *Kenya Vocational Agriculture Education,* published twice a year by West Virginia University, Office of International Programs.'

courses on Kenya's secondary schools. Thus far, almost none of the Vo-Ag students has gone into farming as a career. This is hardly surprising since a secondary school education still brings opportunities for jobs with wages, although nonfarm jobs are becoming extremely scarce—even for those who finish secondary school. Thus, it may not be long before Vo-Ag students discover that they will find their best job opportunities in farm-settlement projects, farm-produce marketing, producers' cooperatives, or self-employed farming.

The Ministry of Education still has serious problems to solve before it can standardize and establish the Vo-Ag program nationally. The mechanization trend in agriculture makes this program very expensive, and until its courses are accepted by the University of East Africa and by major employers, agriculture will remain a second choice for students and Government officials.[37]

Commercial and Technical Subjects.—Accounting, bookkeeping, and other commercial subjects, as well as technical ones, are gradually creeping into the traditionally academic secondary curriculum. The great demand for intermediate-level manpower in commercial and technical fields is bringing about a gradual increase in the proportion of nonacademic subjects.[38]

Examinations

In order to provide some "recognized standard of achievement" for students who fail to complete secondary school, the Kenya Junior Secondary Examination (K.J.S.E.) was introduced in 1966 on a voluntary basis at the end of form II. Many students in the Harambee self-help schools have taken this examination in the hope that passing it would enable them to attend Government-maintained schools, and many P–3 teachers have done so to upgrade themselves to P–2 status (c h.3, p. 32).

To gain a K.J.S.E. certificate a candidate must pass in at least five of the seven subjects and have at least one pass in each of the three groups of subjects:

- English, Swahili
- Mathematics, general science (which includes some biology), biology
- Geography, history

The first K.J.S.E. (1966) brought rather disappointing results—only 28 percent of the 9,000 candidates passed.[39] The second one (1967),

[37] Jon Moris. *The Education and Training of the Farmer.* A paper prepared for the Kericho Conference on Education, Employment, and Rural Development at University College, Nairobi, in September 1966. pp. E-9–12. (unpublished)
[38] Kenya. Ministry of Education. *Triennial Survey 1964–66 and Annual Report 1966.* op. cit. p. 7.
[39] Ibid. p. 29.

however, though attempted by more than double the earlier number, resulted in a 34.5-overall pass rate. The pass distribution was as follows: students from maintained schools—*54.5 percent;* from Harambee schools *34.5 percent;* students studying independently—*24.8 percent.*[40]

The third K.J.S.E. (1968) resulted in an overall pass rate of about 20 percent. The participants in this examination who were from schools permitted to administer public examinations for all comers had a group pass rate of 24.6 percent; while those who were from schools not recognized by the Government for this purpose (or who had studied independently—not in any school) had a group pass rate of 11.4 percent.[41]

Examinations Since October 1967

The East African Examinations Council was created on October 1, 1967 by the three East African countries. Chaired by the University of East Africa's Vice-Chancellor, this Council was composed of representatives from the University's three component colleges, the Ministries of Education in the Community's three member countries (Kenya, Tanzania, and Uganda), and the school systems in those countries.[42]

Relevance of Examinations and Syllabuses.—The Kenya Ministry of Education declared the Council's task was to "progressively assume responsibility for secondary school examinations in the three countries of East Africa." [43] Previously, the University of Cambridge Overseas Certificate Syndicate had borne this responsibility along with criticism that it was a foreign anachronism from Colonial Government days. Starting some years before Kenya's Independence in 1963, however, representatives of the Ministry of Education, the University Colleges, and the school systems in the three East African countries had begun to play a major role in formulating secondary school examinations and syllabuses. Today, the syllabuses and examinations produced by the East African Examinations Council are gradually becoming more relevant to East African needs than were their counterparts in the past.

The East African Certificate of Education.—Secondary students take examinations in forms 4 and 6, and these examinations constitute the principal selection device for separating those who will continue for further education from those who will go directly into the labor market. In form 4, the so-called "Ordinary" or "O"-level examinations consist of one on the English language and one each on five to seven other subjects. Although the range of five to seven subjects is wide, choice in

[40] Kenya. Ministry of Education. *Annual Report 1967.* op. cit. p. 17.
[41] Kenya. Ministry of Education. *Annual Report 1968.* op. cit. p. 16.
[42] Ibid. p. 16.
[43] Ibid. p. 2.

electing them is largely determined by what subjects a given school offers.

Candidates who are successful on the "O"-level examinations receive the East African Certificate of Education, "O" level.[44] Although secondary school enrollment has increased dramatically, the rate of passing the "O"-level examinations has remained approximately the same.[45]

In form 6, the "A" (Advanced)-level examinations concentrate on three or four subjects which the candidate will pursue at an institution of higher education.[46] His form-6 studies fall into one of two "streams" —arts or science. The three or four subjects he will take are narrowly concentrated in the particular stream. If he chooses the science stream he will automatically study for a science degree when he reaches the university; if the arts stream, the humanities and social sciences.

Science accounts for more than half the form-6 enrollment, and the Kenya Government is trying to implement the Manpower Survey recommendation to increase the proportion of science students even more and to reduce the chances that they will fail the "A"-level examinations.[47]

University College, Nairobi

Faculties

In 1968, University College, Nairobi, had seven faculties, approximately equivalent to "schools" in United States universities (appendix H). The College set overall minimum entrance requirements based on the applicant's examination record in secondary school or on the Mature-Age Entry Scheme for persons lacking the formal academic qualifications. Each faculty could, however, stipulate that the applicant must have attained a certain level in a particular subject.[48]

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[44] The East African Certificate of Education replaced the Cambridge Overseas School Certificate.

[45] Kenya. Ministry of Education. *Annual Report 1967*. op. cit. p. 85. (The more or less stabilized rate of passing may result from the fact that, as educational opportunity increases, more and more able Africans are outnumbering less able Asians and Europeans.)

[46] The East African Certificate of Education, "A" level, replaces the Cambridge Overseas Higher School Certificate. See the Ministry of Education's *Annual Report 1967*. op. cit. p. 16.

[47] Kenya. Ministry of Economic Planning and Development. *High Level Manpower: Requirements and Resources in Kenya 1964–1976*. Nairobi: Government Printer, 1965. pp. 37 and 38.

[48] For details concerning the number of passes by level and subject, see the annual *Calendar* of University College, Nairobi. The Mature-Age Entry Scheme enabled candidates over age 25 to be considered for admission if they had completed their formal education at least 5 years previously.

Subject Concentration

Most bachelor-degree programs took 3 years, except for veterinary science—at least 4 years; and medicine—at least 5 years. Contrasting with the American liberal arts degree of rather broad majors spread over 4 years, University College, Nairobi followed the British pattern of a rather specialized degree spread over 3 years. After taking three subjects in the 1st year, most University College students concentrated on either one or two subjects in their 2d and 3d years. For example, a student in the science faculty might have taken botany, chemistry, and zoology in the 1st year; botany and zoology in the 2d, and only botany in the 3d.[49]

Subject Content

The content of University College courses was very similar to that of universities anywhere except that it concentrated, when appropriate, on the African scene. History, geography, and literature courses devoted considerable attention to East Africa; botany and zoology were oriented toward local flora and fauna. But Shakespeare, as in other countries, was very much a part of the Kenya English syllabus. The universal aspects of advanced scholarship were maintained at University College, Nairobi, so that its graduates could hold their own in the international academic community while pursuing careers which could contribute to Kenya's development.

Curriculum Development and Research

In 1957, under the Kenya Development Plan for 1957–60 (ch. 2, p. 14), the Colonial Government established a Special Center to improve the quality of English in primary schools for Asians. The Center's success in this task led to a similar task in primary schools for Africans, and later the Kenya Government changed the Special Center into a language section of the Curriculum Development and Research Center (C.D.R.C.) which the Government had created in 1966. In 1967 the C.D.R.C. became a part of the Kenya Institute of Education in the Ministry of Education (ch. 3, p. 36).

The Language Section.—The C.D.R.C.'s language section, working according to the New Primary Approach methods, produced a new syllabus for the study of English (the Safari English course) and also one for the study of Swahili by pupils whose native language is not Swahili.

The Science Section.—Formerly the Nairobi Science Teaching

[49] For further details see the College's annual *Calendar.*

Center, the C.D.R.C.'s science section was established in 1961 to upgrade secondary and primary schools.

The Mathematics Section.—Formerly the Mathematics Center, the C.D.R.C.'s mathematics section produced textbooks for the East African School Mathematics Projects and also, under the New Primary Approach methods, textbooks for the "Entebbe Math" program.

The General Methods Section.—Formed in 1966 to coordinate the testing and evaluating of all materials produced in the Curriculum and Development Research Center, the general methods section produced prereading charts as well as basic readers in the Kikuyu, Luo, and other vernacular languages.

Other Services.—The Center presented radio and television programs over the Voice of Kenya and sponsored teacher workshops and inservice training.[50]

[50] Kenya. Ministry of Education. *Triennial Survey 1964–66 and Annual Report 1966.* op. cit. pp. 26 and 27. (The Ministry's unpublished annual report on the Center gives further details.)

Education Outside the Formal System

Particularly true in developing countries like Kenya is the old saying that more learning takes place outside the school buildings than inside. Only 60 percent of the Kenya population of primary school age attends school and only a small percent of the population beyond that age have had any formal schooling.

The discussion that follows deals with certain Kenya institutions that provide education and training[1] outside the jurisdiction of the Ministry of Education or of former University College, Nairobi.

Ministry-Sponsored Institutions

Most Ministries fund training courses for specific skills needed by their employees and/or constituents. For example, the Ministry of Health trains medical assistants and other subprofessionals. In 1966 it opened a Domestic Science College at Karen,[2] 15 miles west of Nairobi—a gift from the Danish Government. The Ministry of Agriculture and Animal Husbandry provides training for its field staff, as well as for farmers, at a variety of institutions. The Ministry of Labor runs a Management Training Center with help from the International Labor Organization (I.L.O.), and the Ministry of Works has a Staff Training Center in Nairobi's industrial area. This Center gives practical training to technicians as a service to Kenya Polytechnic.

Egerton College

Located at Njoro (about 120 miles northwest of Nairobi in Rift Valley Province), Egerton College offers a 3-year course leading to diplomas in agricultural engineering, animal husbandry, dairy technology,

[1] As the terms are commonly used, *education* is the dual process of developing attitudes and transmitting knowledge; *training*, the process of teaching specific skills for an occupation. In practice, however, the distinction between the two is often blurred.

[2] Named after Baroness Karen von Blixen, who wrote *Out of Africa* and other books under the pen name Isak Dinesen.

and forestry to students who have the East African Certificate of Education, "O"-level. The College produces approximately 100 "diplomates" (students awarded diplomas) per year at the subuniversity level.[3]

Kenya School of Law

Entirely separate from the University College and from the Ministry of Education is Kenya School of Law. Composed of the Chief Justice, the Solicitor General, leading barristers, and representatives of the Law Society of Kenya, the Council of Legal Education manages the School as its Board of Directors.

The School's 75 students in 1967, who had entered with the East African Certificate of Education, "O"-level, were taking a 5-year course. A few students complete the course in 4 or even 3 years, depending upon the amount of previous training and/or experience which they have had before or during law school as articled clerks in the offices of lawyers or judges. At the end of the course, students do not receive a degree but instead a document attesting to their professional qualifications and entitling them to practice law. Indirectly, all students are supported by the Government through a grant from the Kenya Treasury to the School of Law. As of 1970 it appeared likely that some form of Law School would be added to the University of Nairobi.

Institutes of Administration

The K.I.A.

Most of the Government's inservice training is centralized at the Kenya Institute of Administration (K.I.A.) located at Kabete, about 15 miles north of Nairobi. Established in 1961 for "crash" courses in Africanization to prepare for Independence, the Institute is now in the President's Office under the Directorate of Personnel, which is responsible for setting up the Institute's curriculum and selecting its trainees. In 1964 a committee appointed by the Government to review the status of K.I.A. affirmed its role in nation building beyond the short-term need for Africanization.[4]

Following the Committee's report, K.I.A. continued to expand its training in administrative skills and attitudes, and by 1967 it had trained about 2,500 Government employees in five basic fields: [5]

[3] The term *graduate* in Kenya refers to a student who has been awarded a university degree.

[4] *Report of the Committee of Review Into the Kenya Institute of Administration.* A. L. Adu, Chairman. 1964. (unpublished)

[5] Interviews with staff of the Kenya Institute of Administration. In 1967 the Governments of Denmark, Norway, and Sweden helped Kenya open a cooperative providing 3- or 4-month courses for officers and members of cooperative societies. The

1. *Community Development:* Courses to train Community Development officers in the objectives and methods of the self-help movement.
2. *Cooperatives:* Courses to train Cooperative officers.
3. *Executives:*
   a. Accountancy courses: To provide 3 months of executive training to accountants.
   b. Direct-Entry courses: To provide 1 year of executive training to holders of the East African Certificate of Education, "O" level.
   c. Office Management courses: To train registry clerks in filing systems and record keeping.
   d. Personnel Management courses.
4. *Local Government:* Courses to explain the administrative, financial, and legal organization of county and municipal councils.
5. *Public Administration:* Courses to train district officers, district commissioners, and others holding posts in the Provincial administration; and also to train senior managers in the private sector.

In 1967 the Kenya Government allocated the Institute $28,000 for expanding its facilities to accommodate from 350 to 450 students at a time. The British Government and the Ford Foundation have given financial and technical aid, and the United States Agency for International Development (US/AID) provided staff for several years through a contract with Syracuse University.

The Institute at Maseno

The Directorate of Personnel runs another inservice training institution at Maseno in Western Province. Designed to supplement K.I.A.'s offerings, the Maseno courses are for assistant Community Development officers, assistant Cooperative officers, court prosecutors, and other employees such as secretaries,[6] in the public service.

Institutions Sponsored by the East African Community

As the largest single employer in East Africa, the East African Community offers some 100 different inservice training programs for its employees.

K.I.A. courses for Community Development officers and Cooperative Society officers are limited to civil servants.

[6] Since 1967 the Kenya Government has been supporting and running a secretarial college in both Mombasa and Nairobi, which had been supported earlier by the Swedish Government.

The East African Staff College

In 1964 Kenya, Tanzania, and Uganda under what was then the Common Services Organization (now the East African Community—EAC) started the East African Staff College. Held successively in the three capital cities of Nairobi, Dar es Salaam, and Kampala, identical inservice training courses of several months' duration are available to senior-level civil servants and to administrators from the private sector.

The Railway Training School

As a practical matter, the East African Railways and Harbours runs the Railway Training School. Located in Nairobi, this school offers courses at three levels for employees who hold the Certificate of Primary Education (p. 68); the East African Certificate of Education, "O" level (p. 72); or the East African Certificate of Education, "A" level (p. 73), respectively. Each year the Railway Training School sponsors students for engineering courses at University College, Nairobi.

Miscellaneous Schools

The East African Community sends a number of its employees from various branches to overseas schools for specialized training. The Community gives its own courses in customs and excise, postal work, and telecommunications at several cities in each of the three countries.

East African Airways trains its own employees at various levels in Kenya and other countries.

The National Youth Service

Under the Ministry of Labor, the National Youth Service provides a wide range of 2-year vocational and academic courses. During 1970, enrollment was over 3,000. Originally created to try to draw some of the agitators between 25 and 30 years of age away from the pre-Independence political youth wings, the Service has shifted its attention to the 16 to 18-year-olds who drop out of school.

The National Youth Service has been rather successful in finding jobs for its 2-year enrollees, some of whom are assigned to development projects. Although the per capita costs have been high (averaging over $400 per year), this fact must be weighed against the social costs of having youths frustrated and unemployed.

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[1] Much of the material from here to the center head "Adult Education" appeared previously in "Continuing Education for Youth and Adults," by James R. Sheffield and Paul Fordham. *Education, Employment, and Rural Development.* James R. Sheffield, ed. Nairobi: East African Publishing House, 1967. pp. 366–89.

Youth Centers

During the Mau-Mau emergency of the 1950's, the Government established Youth Centers to help keep unemployed youths in Central Province out of trouble. In response to widespread local demand for practically any kind of training, Youth Centers spread throughout the country, and today they number about 150. The Centers are supported entirely by the localities, but the Central Government has assigned an Executive Officer in the Ministry of Cooperatives and Social Services to coordinate and encourage local Youth Center efforts. Community Development officers are expected to stimulate such local efforts.

The self-help nature of Youth Centers causes them to vary considerably in function and effectiveness. Depending upon the availability of funds for recurrent expenses, a Youth Center might be nothing more than a bookless, furnitureless mud hut, where a one-time dropout from standard VII gives lower primary-level instruction to a group of dropouts from standards II and III. On the other hand, in a progressive community, it might be a fairly well-equipped institution giving a number of vocational courses. Again, the Youth Center might be the kind which, in many communities, has been upgraded into an academic Harambee school because of local demand for secondary education.

Correspondence Courses[8]

Although no statistics are available to prove the point, over half of Kenya's school dropouts, according to estimates, enroll at one time or another in a Kenyan or overseas correspondence course. Also, according to estimates, only a small percentage of persons enrolling in correspondence courses ever finish them. One reason, no doubt, is that many enrollees are unable to keep on paying the fees, which must be paid with each lesson.

The commercial profit-seeking schools advertise that students will get higher pay and quicker promotion through having taken the proper correspondence courses from a selection numbering well over 50.

Despite possible waste of time and money and the dubious quality of many correspondence courses, the method of instruction, as such, has an enormous potential for reaching persons isolated in areas remote from cities. For this reason, the Institute of Adult Studies at former University College, Nairobi, in 1967 established a Correspondence Course unit

[8] Ibid.

geared to radio lessons from the Voice of Kenya and supported by US/AID through a contract with the University of Wisconsin (p. 35).

Schools as Business Ventures[9]

When the popular demand for education far exceeds the supply, inevitably a variety of institutions will appear to fill this gap. Harambee schools are usually established by organized self-help efforts of local communities. Although high fees and poor results may lead to disenchantment with Harambee schools, they nevertheless represent well-motivated efforts. If money is wasted and parents and students become frustrated, this is not necessarily owing to any unscrupulous behavior on the part of a given school's administration.

On the other hand, many institutions are established not by the self-help efforts of a community, but by a profit-seeking entrepreneur exploiting a lucrative market. Driving schools and so-called commercial colleges are familiar sights in every town. It is not unusual to hear of a secretarial school that attempts to teach typing to 45 students with only one or two typewriters—often badly in need of repair. Similarly, one often sees trucks with 20 men in the back waiting their turn for five minutes of practice driving. The owners and managers of many such commercial schools are simply exploiting the students. The Government has difficulty in controlling such enterprises, partly because it lacks sufficient staff for the purpose.

4–K Clubs[10]

The highly successful 4-K Clubs were introduced by the Ministry of Agriculture and Animal Husbandry in 1963.[11] Like the 4-H Clubs in America, the 4-K's are based on the rural extension principle of increasing agricultural productivity in its broadest sense while widening the horizons of individual youths who participate in them. Usually, a member of the Agricultural Extension staff will start a 4-K club. Since he takes on the 4-K leadership as an extra job, without extra pay, the club is thereby relieved of recurrent expense for a leader. The children work on specific projects such as raising chickens or growing vegetables and keep the proceeds from their labor. Although field staff must provide a certain amount of theoretical knowledge and supervision, the profit incentive encourages children to learn modern farming methods.

[9] Ibid.
[10] Ibid.
[11] Two full-time officers at the Ministry of Agriculture in Nairobi are responsible for the overall organization. In addition, the Director of Agriculture has instructed all officers in the field to allocate 25 percent of their time to 4–K activities.

By 1967 over 1,200 4-K Clubs were operating throughout Kenya with some 32,000 members divided between junior members (ages 8–15) and senior members (ages 16–22). Primarily, the organization's success has been with students in schools; it has made little progress in mobilizing the much larger and more difficult group of unschooled youths and school dropouts. Nevertheless, the enthusiastic responses among school children and the dramatic successes of some exhibits and fairs help to discredit the familiar statement that school children will take only white-collar jobs and will avoid manual labor. Evidence abounds that when agriculture proves profitable, students are eager to pursue it. On the other hand, one can hardly expect children to reject the modern attitudes which schools symbolize and are supposed to teach, in favor of a life under a traditional agriculture shackled by obsolete methods.

Voluntary Agencies for Youth Work[12]

Training programs and other opportunities for youths administered by church and private organizations are very numerous in Kenya. Among such programs are those that stem from the problem of unemployed school dropouts, who number far more in rural than in urban areas but who have a higher visibility and pose a greater potential source of unrest in the latter.

The Starehe Boys Center

In Nairobi the Starehe Boys Center and the Save-the-Children Fund jointly operate a rescue center for destitute boys, a transit center to provide temporary residential care and medical treatment, and a first-class school. The two organizations make every effort to resettle abandoned boys with their families or relatives and to enroll them in some school or youth center. The vast majority of the placements are successful.

If completely destitute, a boy is kept on as a boarder in Starehe's primary, secondary, or technical school. Day students, selected from among Nairobi's most poverty-stricken children, receive free clothing, supplementary feeding, and free education. In 1967, Starehe enrolled 700 boys and planned to expand to nearly 900 by 1969. Police statistics on vagrant children show a significant improvement since Starehe was founded.

Places Helping Teenage Girls

The Edelvale Home.—The lack of employment opportunities for teenage girls is particularly serious in Nairobi. Operated by the Sisters

[12] See footnote 7.

of Charity, the Edelvale Home helps solve the problem through homecraft courses for the girls, most of whom are unmarried mothers.

The Church Army Community Center.—Girls who leave school after their standard VII year can enroll in a practical 1-year domestic science course at the Church Army Community Center in Nairobi. After completing the course they are almost certain to find jobs through the Center's successful placement service.

The YWCA.—Like the YMCA for boys, the YWCA offers various training courses in Mombasa, Nairobi, and other cities.

Adult Education

The term *adult education* often connotes literacy campaigns and liberal arts courses offered by extramural departments of universities. Although such campaigns and such courses are important to upgrade the economic and social potential of undereducated adults, governments are realizing more and more that the nation-building process requires new attitudes, new knowledge, and new skills on the part of all adults.[13] Thus, investment in the present labor force of adults will yield quicker economic returns than investment in youth. But, unfortunately, more often than not adults resist modernization of work methods and other change—they are likely to oppose the new ideas of their children and their political representatives.

The partially educated dropout is handicapped by lack of training opportunities to fit him for suitable employment. By contrast, the average peasant farmer is fairly swamped by a bewildering array of advisors and services from dozens of Government departments and other "change agencies." Except for the 4–K program described previously, the Ministry of Agriculture does not provide education or training for children. For the most part, farmer training has been limited to extension services and short residential courses for adult farmers at Farmers Training Centers.

Services for Farmers

The Ministry of Agriculture [14]

The following Departments [15] within the Ministry of Agriculture provide farmers with the services indicated:

[13] L. Cliffe. *The Role of Adult Education in the Development of East Africa* (Discussion paper No. 26, March 1966). University College, Nairobi, Institute of Development Studies. (unpublished)

[14] Most of the material under this heading comes directly from *The Education and Training of the Farmer,* a paper prepared by Jon Moris for the Kericho Con-

1. *Agriculture:* Is in charge of cash crops and the usual extension services.
2. *Community Development:* Offers advice on fish farming, nutrition, and vegetable farming.
3. *Cooperative Development:* Conducts extension courses on coffee growing and supervises the use of fertilizers and insecticides.
4. *Fisheries:* Runs fish hatcheries.
5. *Forestry:* Runs a farm-squatter program on areas being replanted with exotic timbers. Issues seedlings and timber-cutting permits.
6. *Lands and Settlements*: Conducts farm demarcation and registration. Selects the sites for access roads.
7. *Veterinary:* Supervises animal health, the distribution of exotic cattle, and grazing.
8. *Water Development:* Selects sites for dams. Provides watering points for livestock.

The Ministry of Education

Secondary schools designated by the Ministry of Education carry vocational agriculture courses offered by this Ministry, which is responsible also for the school farms attached to some primary and secondary schools.[16]

The Ministry of Health

Advice to women on nutrition and sanitation is one of the programs under the Ministry of Health.[17]

Quasi-Government Agencies

Literally dozens of quasi-government agencies maintain at least nominal liaison with the producers of the commodities in which they are interested or with farmers in general. Among these agencies are the following:

Agricultural Development Corporation
Agricultural Finance Corporation
Coffee Marketing Board
Coffee Research Foundation
Cotton Lint and Seed Marketing Board

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ference on Education, Employment, and Rural Development at University College, Nairobi, in September 1966. pp. G–1 and G–2. (unpublished)

[15] The Ministry also has a Department of Information which produces publications and radio programs to inform the public about its operating programs.

[16] Ibid.

[17] Ibid.

Kenya Dairy Board
Kenya Sisal Board
Kenya Tea Development Authority
Kenya Wheat Board
Maize Marketing Board
National Irrigation Board
Pyrethrum Marketing Board

Commercial Firms

Certain commercial firms such as the British-American Tobacco Company, Dalgety Limited (seller of farm equipment), and the Upland Bacon Factory, as well as numerous fertilizer and seed companies, also bombard Kenya farmers with advice and information concerning particular commercial products.

Extension Services

The Drawbacks.—Cooperative unions, youth clubs such as the 4–K Clubs mentioned before and the YMCA, and the extramural department of University College, Nairobi, all offer the farmer an array of extension services which are frequently overlapping and sometimes conflicting.

Kenya is by no means unique in this regard. Agricultural and other bureaucracies everywhere tend to generate more duties as they grow. Their extension services all seem to share certain characteristics:

1. Functions overlap and thus confuse.
2. Technical staff are spread too thin.
3. Battered with more theoretical advice than they can absorb, farmers fail to get enough practical help on specific problems.
4. To the farmer, the extension workers often seem like negative policing agents who enforce rules laid down by their bosses.
5. The low-level administrative side of extension work overbalances the professional research-oriented side.

Community Development.—A prime example of a Government agency hampered by the drawbacks which are almost inherent in extension services is Community Development. Through extension efforts and short courses on a wide variety of subjects the field officers in this program help farm communities to identify their problems and to mobilize their resources to solve them. At best, such efforts serve as catalysts which theoretically generate enough local initiative for the momentum to carry on by itself. But in too many cases bungling amateurism conflicts with professionalism and technical know-how.

In all fairness, however, one should acknowledge that to shift the attitudes of an adult population away from apathy and resistance to innovation and self-help proves far more difficult than merely to recommend

new technical aids such as fertilizer. The educational and training functions of community development must be viewed in conjunction with those of other agencies striving to bring about change.

Farmers Training Centers

Farmers are brought into Farmers Training Centers, which are residential institutions, for short courses lasting 1 or 2 weeks. They pay one or two shillings (14 or 28 cents) per day for the cost of food and fuel.

In 1970, 29 of these Centers were operating. Of that total, 19 were run by the Ministry of Agriculture and the other 10 by the Christian Council of Kenya, the Kenya Tea Development Authority, and the Ministry of Lands and Settlement. The Ministry's Center, located at Thompson's Falls in Central Province, caters to farmers settled on large, formerly European farms; and the Ministry plans to establish another such Center near Eldoret in Rift Valley Province. A Center meeting still another specific need is the one at Bukura in Western Province, established in 1965 by the Ministry of Agriculture to train blind farmers.

Courses.—In 1966, the Training Center courses totaled 706. They were attended by 23,895 cooperative society officers, farmers, and 4–K leaders, of whom a third were women.[18]

Agriculture, animal husbandry, cooperatives, and home economics constitute the broad topics. Specific ones concentrate on identifying and treating certain animal or plant diseases or the husbandry techniques for a new crop.

Evaluation.—Thus far, the Farmers Training Centers appear highly successful. In contrast to extension services per se, which are primarily *product*-oriented, the Centers are *process*-oriented—they concentrate on farmer skills. By emphasizing the innovator rather than the innovation the Centers develop the farmer's managerial capacity to the end that he will allocate his scarce resources wisely.

As Jon Moris has stated, ". . . compared with traditional extension efforts [the Centers] . . . are strikingly effective." Although the Centers experience serious difficulty in attracting and keeping good teachers and although they have, as Moris stated, a tendency "to press upon farmers innovations which are beyond their economic means," they nevertheless do and can in the future offer certain advantages:

[18] Jon Moris. *The Education and Training of the Farmer.* op. cit. p. F-2. At the Centers for Kikuyus in the central part of Kenya, the percentage of women is usually much higher. Generally speaking, more and more women are attending Center courses each year. This is natural—they do most of the farming on the small holdings of fewer than 15 acres (the size to which most Center teaching is geared). It is also significant—they will pass on the modern attitudes and skills which they learn to their children.

1. Given in residence, the courses afford the all-important element of time for demonstrations, explanations, and supervised use of new techniques—things which are impossible in the short visits of an extension worker.
2. Located for the most part near research stations, the Centers can include experimental work in the courses. For the same reason they have access to specialists.
3. The teachers at the Centers are more highly qualified than the field workers in the extension service.
4. Centers can offer training relevant to a specific environment under almost laboratory conditions.

The Board of Adult Education

Responsibility for planning all adult education activities of the Kenya Government resides with the Board of Adult Education established within the Ministry of Education in 1966.[19] In 1967 the Board was transferred to the Ministry of Cooperative and Social Services.

The Board's Functions

The Board is composed of representatives from several other Ministries having a role to play in adult education and from voluntary agencies also engaged in adult education activities. The Ministry of Broadcasting and Information through the Voice of Kenya broadcasts a variety of adult education programs in both English and Swahili. Other Ministries' training courses and extension services provide many kinds of training also. Coordinating all their efforts into a rational, coherent plan which will reduce or eliminate wasteful competition and overlapping is the function of the Board of Adult Education.[20]

As a logical next step, the Board has proposed that adult education supervisors participate in advisory committees at the district (i.e., national administrative) level, where the Board would like to see multipurpose training centers established.[21] In 1968 the Adult Studies Center (formerly the College of Adult Studies) at Kikuyu, some 12 miles north of Nairobi, implemented the Board's proposal by starting courses for

[19] "The Board of Adult Education Act, 1966." *Kenya Gazette Supplement No. 15, Acts 1966.* Nairobi: Government Printer, 1966.

[20] For a description of the proposed role of the Board of Adult Education, see "Continuing Education for Youth and Adults" and "Conference Conclusions," by James R. Sheffield and Paul Fordham. *Education, Employment, and Rural Development.* op. cit.

[21] Kenya. Ministry of Economic Planning and Development. *Development Plan 1966–70.* Nairobi: Government Printer, 1966. p. 326.

extension workers from the Ministries of Agriculture, Education, and Health and from the Ministry of Education's Department of Community Development. Through this common program for training several types of extension workers the Government expresses its conviction that adult education requires an integrated, multifaceted program.

Varieties of Adult Programs

Extramural Courses.—Varied in content, purpose, and sponsorship, adult education programs are abundant. The Institute of Adult Studies at the University of Nairobi offers extramural courses in the cities of Kisumu (Nyanza Province), Mombasa (Coast Province), Nairobi, and Nakuru (Rift Valley Province).

The Institute's extramural courses, mainly academic, lead to national examinations. English ranks as the most popular subject, but special courses in banking, law, and trade unions, opened to qualified persons in those fields, also are popular.

Residential Courses.—The Adult Center's residential courses are of two types: a 3-week course on the economic, political, and sociological background of East Africa and a 1-year course which leads either to (a) the "Mature-Age" entry to the University College or (b) the Certificate of Adult Studies.

Literacy Programs.—The UNESCO-aided Literacy Campaign launched by the Government in 1967 throughout 10 districts had a $41,000 allocation and 10 officers to serve as adult supervisors in those districts. As further help in this campaign UNESCO provided two experts, working out of UNESCO's Sub-Regional Center for Literacy and Adult Education in Nairobi, to help plan and prepare materials.

Education to Conserve Kenya's Natural Resources

Two documents, each bearing the date September 1968, are important to Kenya in its efforts to conserve natural resources and through education to involve citizens in those efforts.

Convention for the Conservation of Nature and Natural Resources

At a September 1968 meeting in Algiers of the Organization for African Unity, Kenya and 37 other countries approved a Convention for the Conservation of Nature and Natural Resources. Although laying

plans for conserving not only fauna, but also flora, soil, and water according to ecological principles, the document dealt primarily with wildlife protection. In December 1968 Kenya again participated in a multination conference with a similar purpose—the International Conference on Game Conservation and Wildlife Management, held in Monte Carlo. The following March 1969 Kenya invited Ethiopia, Somalia, Tanzania, and Uganda to the First Wildlife Conference for Eastern Africa, which was held in Nairobi. Among the Nairobi conferees' discussions of conservation targets and urgencies were those concerning survival of wild animals endangered by habitat destruction, illicit skin trade, and poaching.

Conservation Brochure for Students

Printed in both English and Swahili, a conservation brochure bearing on its cover a personal message from President Jomo Kenyatta was distributed in 1968 to schools throughout Kenya and to the Kenya National Parks. The President's message read as follows: [22]

English

The natural resources of this country—its wildlife which offers such an attraction to visitors from all over the world, the beautiful places in which these animals live, the mighty forests which guard the water catchment areas so vital to the survival of man and beast—are a priceless heritage for the future.

The Government of Kenya, fully realising the value of its natural resources, pledges itself to conserve them for posterity with all the means at its disposal.

Swahili

Mali ya asili ya Nchi hii—wanyama wake wa porini ambao wavutia wageni kutoka pande zote za dunia, mahali pa kupendekeza ambapo wanyama hawa wanaishi, na misitu mikubwa ambayo huzuilia maji yasipotee na kwa hivyo ni muhimu kusitawisha binadamu na wanyama—haya yote ni urithi usio kifani kwa manufaa yatakayoleta siku za mbeleni.

Serikali ya Kenya yajua na yakubali dhamani ya mali yote ya kiasili na yatoa ahadi kualinda kwa kila njia iliyomo mikononi mwao ili mali hiyo indumu milele.

The text of the brochure itself, like most of the popular literature dealing with Kenya's conservation problems, is a blend of appeals to awaken national pride and to stimulate a desire for national economic advancement:

> A Kenyan who travels to other countries and returns says: "This is my land, this is my Nation." He stands on Kenya's soil and is proud. . . . The men who grow coffee in Kenya know the value of the land, they know the importance of preserving water and protecting the soil from erosion. Each year the coffee of Kenya sold overseas brings in nearly ten million pounds.

[22] Prepared, printed, and made available in Kenya by the Washington, D.C.-based African Wildlife Leadership Foundation.

> . . . To protect our resources and use them wisely is to preserve the foundation of the Nation and to build wealth for the people. If, through ignorance, we destroy our resources, our children will pay for our failure. People and Nations are as poor as their land AND it is the people that make rich land poor.

The Ministry of Tourism and Wildlife

Essay Contest.—Since success in attracting tourists depends in large measure on success in conserving the country's wildlife, the juxtaposition of tourism and wildlife functions within the same Ministry is natural. The fact that the Ministry of Tourism and Wildlife engages in activities to educate Kenya children concerning wildlife at the same time that it engages in activities to attract tourists to view it is also natural. On the former front the Ministry sponsors an annual essay contest for secondary school children throughout the country on such topics as why wildlife is an important natural resource and why poaching is harmful to wildlife's future. For the finalists in the contest the Ministry provides a weekend trip to a national park.

Wildlife Clubs in Schools.—At a December 1968 seminar sponsored by the Ministry for secondary school and college teachers, a movement was started for wildlife clubs in secondary schools. Lectures, camping in game areas, competitions, a newsletter, and other activities form the clubs' programs. Like the worldwide Laubach literacy program of every pupil a teacher, the Kenya secondary schools' wildlife clubs are encouraged to arrange some of their projects so that primary schools in their neighborhoods may also participate.

The Kenya National Museum

An aim of the Kenya National Museum in Nairobi is to have an educational program that will extend beyond the confines of its headquarters building to as many Kenyans, both in school and out, as possible through planned (but not yet erected) regional museums. In the meantime, to the extent of its resources the Museum hopes to use mobile units equipped with audiovisual aids and supplied with museum specimens.

In 1971 the Museum hopes to open a new public gallery for displays of large and small mammals and for exhibits (the first of their kind in Africa) that will instruct their viewers in the principles of conservation, ecology, and environmental understanding.

College of African Wildlife Management

Established in 1964, the College of African Wildlife Management located at Mweka, Tanzania, on the slopes of Mount Kilimanjaro, is the

first institution of its kind in Africa. A number of Kenyans have graduated from its 1-year certificate or 2-year diploma courses to become employed by Kenya park or wildlife services. Students from the Range Management Course at Kenya's Egerton College spend several weeks at Mweka for orientation on wildlife, going on safari to carry out animal census exercises and other field activities. Egerton counts this work towards its own course credit.

East African Wildlife Society

Headquartered in Nairobi, the East African Wildlife Society engages in many projects aimed at protecting and conserving wildlife and at instructing adults and children in the principles of wildlife conservation. Among its wide-ranging projects for 1969 were the following: animal rescue and translocation, an ecological survey of a game reserve and one of a marine national park, lease of 16 mm. films for wildlife conservation education, and a mobile film unit.[23]

Through its periodical, *Africana,* the Society conducts a junior members' club and on the pages devoted to these juniors it presents cartoons, letters from members, photographs, stories, and other devices for capturing children's attention and teaching them about animals. In one issue such a device, contributed by a reader, was a crossword puzzle calling principally for names of animals and birds.[24]

[23] *Africana,* 3:10:34, June 1969. p. 34.
[24] Ibid. p. 37.

Conclusions

Education has played a major role in Kenya's development since the time when the European missionaries established the first formal schools in that country. During the Colonial period and also during the period since Independence in December 1963, the Government has been under continuous pressure to expand educational facilities and make the system more relevant to the needs of the majority of the African population.

Within the severe financial constraints of a per capita income which only recently reached $100 per year, Kenya has progressed remarkably towards these educational goals. The quantitative expansion beginning at Independence and the qualitative reforms now being developed by the Curriculum Development and Research Center testify to the Government's commitment. With every means at its command education must help meet the nation's economic, political, and social goals.

In economic terms, education in Kenya has ceased to be merely a social service. It has become an investment in the nation's human resources, and educational planning is an integral part of national manpower strategy and economic planning.

In political terms, the Kenya Government views education as perhaps the most important instrument it possesses to ease racial and tribal tensions and fashion a unified, enlightened citizenry.

In social terms, universal primary education continues as the Government's long-range policy together with a second long-range policy of providing more opportunities for an individual to progress as far as his abilities and resources permit.[1]

As in other developing countries, the dropout problem in the schools is so severe that the number of students at the upper levels is only a fraction of those who started. Because of Kenya's high birth rate of about 3 percent per year and its low death rate, nearly half the population is

[1] Kenya. Ministry of Economic Planning and Development. *Development Plan 1966–70*. Nairobi: Government Printer, 1966. p. 305. Also Kenya. *African Socialism and Its Application to Planning in Kenya* (Sessional Paper No. 10 of 1965). Nairobi: Government Printer, 1965.

under 15 years of age. The educational system therefore bears a tremendous burden. Despite the considerable efforts to extend the educational opportunities which the Development Plan envisions, universal primary education as a goal must be viewed as a long-term one.

As the public in general has become increasingly aware that education is a prerequisite for wage and salary employment, the parents for their part have reacted remarkably. Thus, they have so effectively espoused the cause of Harambee self-help secondary schools that these schools far outnumber Government-aided secondary schools. It remains to be seen, however, whether the training which Harambee schools offer—schools often poorly staffed and inadequately equipped—will relieve the problem of primary-school dropouts or will merely postpone its solution.

In 1968 the Government publicized the fact that the ratio of the number of secondary places to the number of children finishing primary school had improved from 1965 to 1967. Experience in other developing countries, however, indicates that aspirations normally grow faster than job opportunities. Since the vast majority of Kenya's people will probbly remain self-employed farmers until after the beginning of the 21st century, one of the greatest challenges facing the country's educational planners is to ensure that this majority will lead productive lives in rural areas. An equal challenge is to ensure that enough persons continue to be trained for the high-level manpower needs of Kenya's industrialized urban areas.[2]

[2] Kenya. Ministry of Education. *Annual Report 1967*. Nairobi: Government Printer, 1968. pp. 6 and 7.

Appendixes

Appendix A. The African Primary Science Program: Selected Excerpts From Written Materials, 1969

I. Teacher's Guide: *Construction With Grass* [1]

Growing in the school compound and at pupils' homes are various kinds of grasses, reeds and trees which can be used in school for constructing all sorts of toys, models, and structures. In particular, there is one kind of grass that grows in areas of East Africa which many people use for thatching their homes. It often grows to a height of five or six feet. The stems are yellow and are rather rigid. Some people call it olengi, but the name seems to vary from one vernacular to another.

Children of all ages can work with these grasses, but the activities on structure are meant for children of mid-primary age and older.

If this particular olengi grass does not grow in your location, you should look around for suitable substitutes. Papyrus hás long stems and is strong enough for most of the activities in this unit. Other rigid grasses, and tree branches which are thin and straight, will also do. The need is for straight and rigid sticks which will allow pins to pass through them.

• • • • • •

After several lessons spent on the building of whatever your pupils wish to make, it is helpful to focus their attention on a particular problem. Often pupils working with this unit have liked building houses. You can get your pupils involved in an entire series of problems by having a competition to see which group of children can build the tallest house as well as who can build the strongest house. These activities can be made more interesting if the amount of grass or pins is limited. For example, you could limit the number of pins to 25 and the amount of grass to 15 pieces, each three feet long.

It has been found that it is better to encourage pupils to build houses more than *three feet tall.* Houses smaller than this usually become tire-

[1] Trial Edition, July 1969. Principal contributors were B. Zubrowski and B. S. Ochieng of Kenya. Materials were developed with assistance from Education Development Center, Newton, Mass.

some to build since the pupil has to work in small spaces. Also, small houses are not easy to test for strength.

(page 4)

• • • • • •

When your pupils start building large houses, they are immediately challenged with one particular problem. As they started to control the basic cube or rectangular framework, they probably found it very unsteady, and that it tended to move to and fro. Some pupils have described this by saying that the houses were dancing. Pupils have solved the problem by placing the upright grass or sticks in the ground. However, your pupils may have to put their houses in the classroom after the lesson and are therefore forced to use a frame that will support itself.

(page 8)

II. The Science Library Series: *Using the Sky* [2]

This book is one of five books which tell about the stars in the African sky.[3]

At different times of the year, different stars are in the sky. There are so many stars that it is impossible for anyone to learn about everything at once. Use these books as you would use dictionaries. Read the section of the book which tells you most about what you want to know on a particular night. Start with *Stars Over Africa*. Then use each book together with others over a long period of time, rather than reading the books straight through one at a time.

(Back of title page)

When you were reading *Stars Over Africa*, you might have noticed that the stars move. You also may have wondered about this movement and tried to understand it. The way the stars move across the sky is useful and important. If you understand how the stars move, you can use the stars as a calendar to tell the month of the year. You can use them as a clock to tell the time at night. The stars can even be used as markers to keep you from getting lost at night.

(Back of Contents page)

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How the Stars Change During the Night

You now know four big groups of stars: Orion, the Plough, Scorpius, and Pegasus. Just after it gets dark, look at the sky and find one of

[2] Written by W. U. Walton and M. B. R. Savage. Printed February 1969. Materials were developed with assistance from Education Development Center, Newton, Mass.

[3] *Stars Over Africa, Strangers in the Sky, Using the Sky, How the Sky Looks,* and *A Model in the Sky.*

them. Try to remember where it is in the sky. Look at the trees and houses that you can see from where you stand. Choose a tree or house that is just underneath this group of stars. Then you will be able to remember where this group of stars was in the sky.

Come back to the same spot just before you go to sleep. Find the tree which your group of stars was above. Have the stars moved? (See figure 2.)

You will find that the stars do move. The old men in your village watched the stars carefully, night after night. They knew exactly how much the stars moved and what paths in the sky they followed. The old men used this knowledge to tell the time during the night and to keep from getting lost when they had to travel at night.

You can tell time and direction by the stars. To do this, you will need to know how much the stars move during the twelve hours of the night. You will need to know what paths they follow through the sky.

(Page 1)

Appendix B. The 1966 Kenya Preliminary Examination for Entrance to Secondary Schools: Selected Items

General Paper [1]

An example of a disease of the lungs is
- measles ☐
- mumps ☐
- bilharzia ☐
- pneumonia ☐

Some bacteria improve soil by
- reducing the growth of insects ☐
- destroying weeds ☐
- helping matter to decay ☐
- increasing the amount of oxygen ☐

Smallpox can be prevented by
- insecticides ☐
- vaccination ☐
- disinfectant ☐
- tablets ☐

Rusting and burning are similar because during both
- oxygen is used ☐
- nitrogen is given off ☐
- oxygen is given off ☐
- nitrogen is used ☐

The main reason for the defeat of the Germans in East Africa during the First World War was the
- poor training of their soldiers ☐
- wrong decisions of their commander ☐
- shortages caused by the naval blockade ☐
- greater interest in the war in Europe ☐

When dinner was over, Tom went out.
- After Tom went out, dinner was over. ☐
- After dinner, Tom went out. ☐
- Having gone out, Tom had dinner. ☐
- Having dinner, Tom went out. ☐

[1] The word "paper" in this context means an examination section or portion devoted to a specific subject or course and calling for some form of written answers.

English Paper

Mary was so excited that she could not sleep.

Mary was too excited to sleep. ☐
Mary was very excited that she could not sleep. ☐
Mary was too excited that she could not sleep. ☐
Mary was very excited to sleep. ☐

Will you come with me?

You will come with me, isn't it? ☐
You will come with me, will you? ☐
You will come with me, is it? ☐
You will come with me, won't you? ☐

Columbus believed that the earth was round.

Columbus believed the earth round. ☐
Columbus believed round the earth. ☐
Columbus believed the round earth. ☐
Columbus believed around the earth. ☐

Appendix C. Suggested Readings for Form 2[1] (Secondary School): Selected from the English Syllabus, 1967

Title	Author	Publisher
Chaka the Zulu[2]	Thomas Mofolo	Oxford University Press
Climbing Everest: An Anthology[2]	....	Oxford University Press
Cry the Beloved Country[3]	Alan Patton	Longman's
The Jacaranda Tree[4]	H. E. Bates	Longman's
Mankind Against the Killers[5]	James Hemming	Longman's
The Moonstone[3]	Wilkie Collins	Macmillan
Oliver Twist[3]	Charles Dickens	Longman's
Pride and Prejudice[4]	Jane Austen	Longman's
The Red Badge of Courage[3]	Stephen Crane	Longman's
The Talisman	Sir Walter Scott	Ginn
Tom Brown's Schooldays	T. Hughes	Ginn
The Three Musketeers[3]	Alexandre Dumas	Macmillan
Ways of the World[3]	G. C. Thornley	Longman's

[1] At the end of form 2, all students are expected to be able to read English with ease.
[2] From the English Readers' Library.
[3] From The Bridge Series.
[4] From Longman's Abridged Books.
[5] From Stories to Remember.
SOURCE OF DATA: Kenya. Ministry of Education. Circular Letter No. INS/c/4/3/116. 1967.

Appendix D. Suggested Readings for Forms 3 and 4 (Secondary School): Selected from the History Syllabus, 1967

Topic: West Africa South of the Sahara

Title	Author	Publisher
	For Students	
An Active History of Ghana	G. N. Brown	Allen & Unwin
The Federation of Nigeria	Wale Ademoyega	Harrap
A History of Africa Book 1, Part 3	W. E. F. Ward	Allen & Unwin
An Introduction to the History of West Africa	J. D. Fage	Oxford University Press
An Outline of Nigerian History	M. C. English	Longman's
A Political History of Ghana, 1850–1928	D. Kimble	Oxford University Press
A Short History of Ghana	W. E. F. Ward	Longman's
A Short History of Nigeria	C. R. Niven	Longman's
A Short History of Sierra Leone	C. Fyfe	Longman's
Sketch-map History of West Africa	N. Lathan	Hulton
West Africa in History Vols. I & II	W. F. Conton	Allen & Unwin
	For Teachers	
Christian Missions and the Making of Nigeria	Ajayi	Longman's
Constitutional Developments in Nigeria (2d ed., 1964)	Kalu Ezora	Cambridge University Press
Ghana: The Autobiography of Kwame Nkrumah	Kwame Nkrumah	Nelson

Title	Author	Publisher
Ghana: The Road to Independence	F. M. Bourret	Oxford University Press
A History of Ghana	W. E. F. Ward	Allen & Unwin
History of Nigeria	Sir Alan Burns	Allen & Unwin
Nigeria in History	Fajana	Longman's
A Political History of Ghana	D. Kimble	Oxford University Press
The Story of Nigeria	M. Crowder	Faber
Trade & Politics in the Niger Delta, 1830–1885	K. O. Dike	Oxford University Press
The Western Slave Coast and the Rulers	C. Newbury	Oxford University Press

SOURCE OF DATA: Kenya. Ministry of Education. Circular Letter No. INS/D/6/5/Vol. II/107 of 6 April 1967.

Appendix E. The 1967 History Syllabus for Secondary Schools: Selected Items to Prepare Students for Examination

The History of East Africa from c. 1000 to the Present Day

Candidates must attempt three questions. Twelve questions will be set, of which about eight will be on political and constitutional history and about four will be on social and economic history. About one-third of the twelve questions will be set on the period before 1800 and about two-thirds will be set on the period after 1800.

Questions will be set on the history of each of the three countries, Kenya, Tanzania and Uganda, as well as on East Africa as a whole.

Special attention should be given to the following topics:

1. *Early history of East Africa, c.* 1000–1500. Migrations of the Nilotic, Nilo-Hamitic, and Bantu peoples. Pastoralism and cultivation in early iron age societies. External trading contracts. Kilwa and the coastal states.

   The impact of Islam. The rise of Swahili culture.

2. *The formation of East African states, c.* 1500–1800. Effects of the Lwo invasions on Uganda, Rwanda, and Western Tanganyika. The kingdoms of Bunyoro-Kitara and Buganda. The Nyamwezi-Sukuma peoples and the rise of 'ntemi' chiefdoms. Political systems of the Nilo-Hamitic peoples: the Nandi, Masai, and their relations with the Kikuyu and Kamba.
3. *The later history of the coast,* 1498–1800. The struggle for control: the Portuguese and Turks. The establishment of Omani power.
4. *The growth of external contacts and pressures, c. 1800–c. 1880.*
   (i) The Ngoni invasions and their effects. Internal trade; the role of the Nyamwezi, Yao and Kamba.
   (ii) Economic and political development of Zanzibar and dependencies: the clove industry and slave labour. Arab penetration from the East Coast and up the Nile and the

reaction of East African societies. The rise of military states; Arab-Swahili relations with the Kikuyu, Kamba, etc.: Islam in Buganda.

(iii) Pressures from the north; Egypt, Ethiopia.

(iv) Growth of the European connection; British, French and American activities on the coast before 1860. Later European penetration of the interior; missionaries, explorers, traders. Initial reactions to them.

5. *The European scramble and the East African response,* 1880–*c.*1906.

Anglo-German rivalry and the drawing of the frontiers, 1884–90. Anglo-French missionary rivalry in Uganda; the Uganda Agreement (1900) and its significance.

SOURCE OF DATA: Kenya. Ministry of Education. Circular Letter No. INS/D/6/5 of 6 October, 1966.

Appendix F. The 1968 English Literature Syllabus for Form 4 (Secondary School)[1]

Literature in English (East Africa)

A special paper in Literature in English in the Joint Examination for the School Certificate and General Certificate of Education, based on the syllabus given below, will be set for candidates in East Africa in and after 1968. All candidates in Kenya, Uganda, and Tanzania who are offering Literature in English must take this paper, and the syllabuses as printed in the School Certificate Regulations for 1968 are therefore no longer available to candidates in these areas.

Syllabus

There will be one paper of 2½ hours. The paper will be divided into two sections, Section A containing plays and novels for detailed study, and Section B containing plays, novels, other prose, and poetry, for general reading. Both context questions and essay questions will be set on all the books in Section A; essay questions only will be set on the books in Section B.

Candidates will be required to study two works in Section A, one play and one novel, selected from a list of texts. They must answer one question on each of these two works, choosing one context question and one essay question. One context question only will be set on each book.

In Section B candidates will be required to study three works or groups of works, and to answer one essay question on each.

The context questions set on the works in Section A will contain considerably longer passages than those formerly set. Any passage chosen will be of significance to the work as a whole, and questions set on it will not test understanding of individual words or phrases but rather the candidate's response to the content of the passage and its relation to other parts of the work.

[1] Prepared by the University of Cambridge specifically for East Africa.

The prescribed texts for 1968 will be as follows:

Section A

Either Shaw, *Caesar and Cleopatra* (Excluding the Preface and Prologues);
or Bridie, *Tobias and the Angel* (Constable);
and either Hemingway, *The Old Man and the Sea* (Cape);
or Achebe, *Things Fall Apart* (Heinemann Educational Books, African Writers Series).

Section B

Any three of the following to be studied. Where works are paired, both are to be studied as one option.

Shakespeare, *Macbeth*;
Bridie, *Jonah and the Whale* (Constable) and Obey, *Noah* (Heinemann Educational Books);
Steinbeck, *The Pearl* (Heinemann Educational Books) and Sherman, *Old Mali and the Boy* (Heinemann Educational Books);
Nevil Shute, *No Highway* (Heinemann Educational Books); Grimble, *A Pattern of Islands* (full text) (Murray); *Ten Twentieth-Century Poets* (ed. Wollman, Harrap), (the poems by Thomas Hardy, Edward Thomas, and Andrew Young only).

SOURCE OF DATA: University of Cambridge. Local Examinations Syndicate. *Literature in English: East Africa 1968.* Cambridge, July 1966. (Quoted in full)

Appendix G. Weekly Allocation of Secondary School Periods to Subjects Recommended by the Ministry of Education: January 1967 [1]

[. . . indicates source gave no data]

Subject	Class period (all forms)	Preparation period	
		Forms 1 and 2 [2]	Forms 3 and 4 [3]
Agriculture	3 [4]	....	....
Art	3	....	....
Current affairs	1	....	....
Domestic science	4	....	....
English	9	3	3 or 4
French	3	....	....
Geography	3	1	2
Handwork	3	....	....
History	3	1	2
Mathematics	7	2	2
Music	3	....	....
Physical education	2	....	....
Religious studies	3	1	1
Science	...	1	2 or 3
Biology	3	....	....
General	6	....	....
Physics with chemistry	6	....	....
Swahili	3	1	1

[1] Variations occur in different localities.
[2] A form 1 or 2 student has a total of 10 preparation periods.
[3] A form 3 or 4 student has a total of 13 to 15 preparation periods.
[4] Plus 2 extracurricular periods.

SOURCE OF DATA: Kenya. Ministry of Education. Circular Letter No. INS/C/1/8/85. January 27, 1967. *Secondary School Curriculum.* (unpublished)

Appendix H. Faculties, Departments, and Degrees at University College, Nairobi: 1968

Faculty of—	Department of—	Degrees [1]
Arts	Economics	B.A.
	Education	M.A.
	English	Ph. D.
	Geography	D. Litt.
	Government	
	History	
	Mathematics	
Architecture design and development	Architecture	B.A. Arch.
	Art	B.A. Building Economics
	Land Development	B.A. Land Economics
Commerce	Accounting	B. Comm.
	Business Administration	M. Comm.
	Domestic Science [2]	Ph. D.
	Government	
	Law [3]	
Engineering	Civil Engineering	B. Sc. Eng.
	Electrical Engineering	M. Sc. Eng.
	Mechanical Engineering	Ph. D.
	Surveying	D. Sc.
Medicine [4]	Anatomy and Histology	M.B., Lh. B. [5]
	Medicine	
	Obstetrics and Gynecology	
	Pathology and Microbiology	
	Pediatrics	
	Physiology and Biochemistry	

[1] Degrees are awarded by the faculties, not by the departments.

[2] Offers a diploma.

[3] In July 1970 a Faculty of Law was established in University College's successor, University of Nairobi, by upgrading the old Department of Law. This new faculty comprises three departments—Law and Jurisprudence, Public and Comparative Law, and Commercial Law. The degree to be awarded is L.L.B.

[4] Started in 1967.

[5] Combined degrees for medicine and surgery.

Faculty of—	Department of—	Degrees[1]
	Preventive and Community Medicine	
	Surgery	
Science	Botany	B. Sc.
	Chemistry	M. Sc.
	Geography[6]	Ph. D.
	Geology	D. Sc.
	Mathematics[6]	
	Meteorology	
	Physics	
	Zoology	
Veterinary Science	Animal Husbandry	D.V. Sc.
	Clinical Studies	M.V. Sc.
	Pathology and Microbiology	Ph. D.
	Physiology and Chemistry	
	Veterinary Anatomy	

[6] Administratively, an inter-faculty department offering either a B.A. or B.Sc.

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